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=> d l146 bib abs hitrn tot

L146 ANSWER 1 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:781459 HCAPLUS
DN 135:335173
TI Cyclodextrin polymer compositions as drug carriers
IN Kosak, Kenneth M.
PA USA
SO U.S. Pat. Appl. Publ., 28 pp., Cont.-in-part of U.S. 6,048,736.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001034333	A1	20011025	US 2001-775011	20010201 <--
	US 6048736	A	20000411	US 1998-223055	19981230 <--
	WO 2000040962	A1	20000713	WO 1999-US30820	19991227 <--
	W: AU, BR, CA, CN, IL, IN, JP, MX, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	US 1998-223055	A2	19981230 <--		
	WO 1999-US30820	A2	19991227		
	US 1998-67921	B2	19980429 <--		

AB This invention discloses compns. of cyclodextrin polymers for carrying drugs and other active agents. Compns. are also disclosed of cyclodextrin polymer carriers that release drugs under controlled conditions. The invention also discloses compns. of cyclodextrin polymer carriers that are coupled to biorecognition mols. for targeting the delivery of drugs to their site of action. The advantages of the water-sol. cyclodextrin polymer carrier are: drugs can be used based on efficacy without soly. or conjugation requirements; drugs can be delivered as macromols. and released within the cell; drugs can be targeted by coupling the carrier to biorecognition mols.; prepn. methods are independent of the drug to facilitate multiple drug therapies. Thus, a cyclodextrin polymer was

prepd. by the reaction of .beta.-cyclodextrin with 1,4-butanediol diglycidyl ether and 2-aminoanthracene was incorporated into the polymer.
IT **315-30-0**, Allopurinol
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclodextrin polymer compns. as drug carriers)

L146 ANSWER 2 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:754456 HCAPLUS
DN 133:306344
TI Targeted mutagenesis in living cells using modified **oligonucleotides**
IN **Meyer, Rich B., Jr.**; Gamper, Howard B.; Kutyavin, Igor V.; Gall, Alexander A.
PA Epoch Pharmaceuticals, Inc., USA
SO U.S., 19 pp., Cont.-in-part of U.S. 5,849,482.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 8

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	US 6136601	A	20001024		US 1997-827117	19970326	
	US 5849482	A	19981215		US 1995-485611	19950607	<--
PRAI	US 1991-748138	B1	19910821				
	US 1994-178733	B2	19940107				
	US 1995-485611	A2	19950607				
	US 1988-250474	B2	19880928	<--			
	US 1989-353857	B1	19890518				
	US 1993-11482	B2	19930126				
	US 1993-49807	B1	19930420				
	US 1994-226949	A2	19940627				
	US 1994-334490	A	19941104				

AB A method for introducing a site-specific mutation into a target **polynucleotide** sequence is presented. The method involves the use of an **oligonucleotide** capable of binding to the target sequence, either by triplex formation (mediated by Hoogsteen, reverse Hoogsteen or equiv. base pairing) or by Watson/Crick base pairing (in the presence of a recombinase enzyme). The **oligonucleotide** of the invention is modified by the covalent attachment of one or more electrophilic groups. When a modified **oligonucleotide** is bound to its target sequence, the electrophilic group is able to interact with a nearby **nucleotide** in the target sequence, causing a modification to the **nucleotide** that results in a change in **nucleotide** sequence. Compns. used in the practice of the method are also disclosed.
IT **237059-49-3D, oligonucleotides** contg.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(targeted mutagenesis in living cells using modified **oligonucleotides**)
RE.CNT 133 THERE ARE 133 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L146 ANSWER 3 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:238403 HCAPLUS
DN 132:270079
TI Cyclodextrin polymers for carrying and releasing drugs
IN Kosak, Kenneth M.
PA USA
SO U.S., 19 pp., Cont.-in-part of U. S. Ser. No. 67,921, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 6048736	A	20000411	US 1998-223055	19981230	<--
	WO 2000040962	A1	20000713	WO 1999-US30820	19991227	<--
	W: AU, BR, CA, CN, IL, IN, JP, MX, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
	EP 1183538	A1	20020306	EP 1999-970862	19991227	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
	US 2001034333	A1	20011025	US 2001-775011	20010201	<--
	US 2001021703	A1	20010913	US 2001-829551	20010410	<--
PRAI	US 1998-67921	B2	19980429	<--		
	US 1998-223055	A	19981230	<--		
	WO 1999-US30820	W	19991227			

AB This invention discloses methods for prepg. compns. of cyclodextrin polymers for carrying drugs and other active agents. Methods are also disclosed for prepg. cyclodextrin polymer carriers that release drugs under controlled conditions. The invention also discloses methods for prepg. compns. of cyclodextrin polymer carriers that are coupled to biorecognition mols. for targeting the delivery of drugs to their site of action. The advantages of the water sol. (or colloidal) cyclodextrin polymer carrier are: (1) drugs can be used that are designed for efficacy without conjugation requirements, (2) it will allow the use of drugs designed solely for efficacy without regard for soly., (3) unmodified drugs can be delivered as macromols. and released within the cell, (4) drugs can be targeted by coupling the carrier to biorecognition mols., (5) synthesis methods are independent of the drug to facilitate multiple drug therapies. .beta.-Cyclodextrin was **crosslinked** while complexed with anthracene at a molar ratio of 4:1. Chloroform extn. did not remove the anthracene, since it was completely entrapped within the cyclodextrin.

IT **315-30-0**, Allopurinol
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclodextrin polymers for carrying and releasing drugs)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L146 ANSWER 4 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:659532 HCAPLUS
DN 131:296189
TI **Oligonucleotides** containing pyrazolo[3,4-d]pyrimidines for hybridization and mismatch discrimination
IN Meyer, Rich B., Jr.; Afonina, Irina A.; Kutyavin, Igor V.
PA Epoch Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9951775	A1	19991014	WO 1999-US7492	19990405	<--
	W: AU, CA, JP					
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
	US 6127121	A	20001003	US 1998-54830	19980403	
	CA 2327547	AA	19991014	CA 1999-2327547	19990405	<--
	AU 9934724	A1	19991025	AU 1999-34724	19990405	<--
	EP 1068358	A1	20010117	EP 1999-916394	19990405	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
	JP 2002510507	T2	20020409	JP 2000-542486	19990405	<--
PRAI	US 1998-54830	A	19980403	<--		
	WO 1999-US7492	W	19990405			

AB **Oligonucleotides** in which one or more purine residues are substituted by pyrazolo[3,4-d]pyrimidines exhibit improved hybridization properties. **Oligonucleotides** contg. pyrazolo[3,4-d]pyrimidine base analogs have higher melting temps. than unsubstituted **oligonucleotides** of identical sequence. Thus, in assays involving hybridization of an **oligonucleotide** probe to a target **polynucleotide** sequence, higher signals are obtained. In addn., mismatch discrimination is enhanced when pyrazolo[3,4-d]pyrimidine-contg. **oligonucleotides** are used as hybridization probes, making them useful as probes and primers for hybridization, amplification and sequencing procedures, particularly those in which single- or multiple-**nucleotide** mismatch discrimination is required.

IT **271-80-7D**, 1H-Pyrazolo[3,4-d]pyrimidine, derivs. **315-30-0** **2380-63-4**, 1H-Pyrazolo[3,4-d]pyrimidin-4-amine **2537-04-4**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(**oligonucleotides** contg. pyrazolo[3,4-d]pyrimidines for hybridization and mismatch discrimination)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L146 ANSWER 5 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:659404 HCAPLUS
DN 131:282379
TI Hybridization and mismatch discrimination using **oligonucleotides** conjugated to minor groove binders
IN Hedgpeth, Joel; Afonina, Irina A.; Kutyavin, Igor V.; Lukhtanov, Eugeny A.; Belousov, Evgeniy S.; Meyer, Rich B., Jr.
PA Epoch Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9951621	A2	19991014	WO 1999-US7487	19990405 <--
	WO 9951621	A3	20011108		
	W: AU, CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6312894	B1	20011106	US 1998-54832	19980403 <--
	CA 2329135	AA	19991014	CA 1999-2329135	19990405 <--
	AU 9934721	A1	19991025	AU 1999-34721	19990405 <--
	EP 1144429	A2	20011017	EP 1999-916391	19990405 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1998-54832	A	19980403 <--		
	US 1995-415370	A2	19950403 <--		
	WO 1999-US7487	W	19990405		

AB Conjugates between a minor groove binding mol., such as the trimer of 1,2-dihydro-(3 H)-pyrrolo[3,2-e]indole-7-carboxylate (CDPI3), and an **oligonucleotide** form unusually stable hybrids with complementary target sequences, in which the tethered CDPI3 group resides in the minor groove of the duplex. These conjugates can be used as probes and primers. Due to their unusually high binding affinity, conjugates as short as 8-mers can be used as amplification primers with high specificity and efficiency. Minor groove binder (MGB) conjugation also increases the discriminatory power of short **oligonucleotides**, providing enhanced detection of **nucleotide** sequence mismatches by short **oligonucleotides**. The MGB-conjugated probes and primers described herein facilitate various analytic and diagnostic procedures, such as amplification reactions, PCR, detection of single-**nucleotide**

polymorphisms, gene hunting, differential display, **fluorescence** energy transfer, hydrolyzable probe assays and others; by allowing the use of shorter **oligonucleotides**, which have higher specificity and better discriminatory power.

IT **2380-63-4**, 4-Amino-1H-pyrazolo[3,4-d]pyrimidine **2465-59-0** **2537-04-4**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(**oligonucleotides** conjugates contg.; hybridization and mismatch discrimination using **oligonucleotides** conjugated to minor groove binders)

L146 ANSWER 6 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:505631 HCAPLUS
DN 131:154471
TI Targeted mutagenesis in living cells using modified **oligonucleotides**
IN **Meyer, Rich B., Jr.**; Gamper, Howard B.; Kutyavin, Igor V.; Gall, Alexander A.
PA Epoch Pharmaceuticals, Inc., USA
SO U.S., 20 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 8

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	US 5935830	A	19990810		US 1997-827116	19970326	
	US 5849482	A	19981215		US 1995-485611	19950607	<--
	CA 2223584	AA	19961219		CA 1996-2223584	19960607	
PRAI	US 1995-485611	A2	19950607				
	US 1988-250474	B2	19880928	<--			
	US 1989-353857	B1	19890518				
	US 1991-748138	B1	19910821				
	US 1993-11482	B2	19930126				
	US 1993-49807	B1	19930420				
	US 1994-178733	B2	19940107				
	US 1994-226949	A2	19940627				
	US 1994-334490	A	19941104				

AB A method for introducing a site-specific mutation into a target **polynucleotide** sequence is presented. The method involves the use of an **oligonucleotide** capable of binding to the target sequence, either by triplex formation (mediated by Hoogsteen, reverse Hoogsteen or equiv. base pairing) or by Watson/Crick base pairing (in the presence of a recombinase enzyme). The **oligonucleotide** of the invention is modified by the covalent attachment of one or more electrophilic groups. When a modified **oligonucleotide** is bound to its target sequence, the electrophilic group is able to interact with a nearby **nucleotide** in the target sequence, causing a modification to the **nucleotide** that results in a change in **nucleotide** sequence. Compns. used in the practice of the method are disclosed. Also disclosed are arm-leaving group structure having the formula -A-L such as (CH2)qY(CH2)mL, (CH2)qNHCO(CH2)m(X)n'N(R1)(CH2)pL, or (CH2)q'O(CH2)q''NHCO(CH2)m(X)n'N(R1)(CH2)pL (q=0-8, q'=1-7; Y=NH2, OH, SH, COOH, C.ident.CH; X= (Cl, Br, lower alkyl, lower alkoxy-substituted) Ph; n'=0, 1; p= 1-6; R1=H, lower alkyl, or (CH2)pL; L=Cl, Br, I, SO2R2, S+R3; R3,R4=C1-6 alkyl, aryl, heteroaryl, or R3 and R4 form a C1-6-alkylene bridge).

IT **237059-49-3D, oligonucleotides** contg.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(targeted mutagenesis in living cells using modified **oligonucleotides**)

RE.CNT 155 THERE ARE 155 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L146 ANSWER 7 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:612101 HCAPLUS
DN 129:239906
TI DNA glycosylase inhibitors and their therapeutic uses
IN Verdine, Gregory L.; Deng, Li
PA President and Fellows of Harvard College, USA
SO PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9839334	A1	19980911	WO 1998-US4604	19980309 <--
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6369237	B1	20020409	US 1997-812653	19970307
	AU 9867587	A1	19980922	AU 1998-67587	19980309 <--
PRAI	US 1997-812653	A	19970307 <--		
	WO 1998-US4604	W	19980309 <--		

OS MARPAT 129:239906
AB The present invention pertains to novel inhibitors of DNA glycosylases. The invention is based at least in part on the observation that specific substituted pyrrolidines, and analogs thereof, are capable of specifically inhibiting DNA glycosylases, e.g., as transition state analogs, and consequently are useful for modulation of DNA repair. A stereoselective, general, and practical synthetic route is developed for these inhibitors. An adenine-contg. inhibitor binds adenine glycosylase MutY specifically in a strength that surpassed the best inhibitor previously reported for any glycosylase. Such compds. can, for example, be used for treating subjects having a disorder assocd. with excessive cell proliferation, such as in the treatment of various cancers. Furthermore, these glycosylase inhibitors can be used as antibacterial, antiviral, and antifungal agents.
IT **271-80-7DP**, 1H-Pyrazolo[3,4-d]pyrimidine, **nucleotide** derivs. contg. **315-30-0DP**, **nucleotide** derivs. contg.
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(DNA glycosylase inhibitors and their therapeutic uses)

L146 ANSWER 8 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:550433 HCAPLUS
DN 129:185075
TI Targeted modification of the ccr-5 gene with **crosslinking** triplex-forming **oligonucleotides**
IN Meyer, Rich B., Jr.; Kutyavin, Igor V.
PA Epoch Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9834945	A1	19980813	WO 1998-US2314	19980206 <--
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9862715	A1	19980826	AU 1998-62715	19980206 <--
PRAI	US 1997-37464P	P	19970206 <--		
	US 1998-19387	A	19980205 <--		
	WO 1998-US2314	W	19980206 <--		

AB Claimed here are **oligonucleotides** capable of forming triple-stranded complexes with the CCR-5 chemokine receptor gene, complexing with it via **crosslinking**. The **oligonucleotides** bear alkylating **crosslinking** groups, capable of causing targeted modification of the CCR-5 gene. Such modifications can impair the ability of the CCR-5 gene product to serve as a co-receptor for human immunodeficiency viruses.

IT **2537-04-4**
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
(ppG modified base; targeted modification of ccr-5 gene with **crosslinking** triplex-forming **oligonucleotides**)

L146 ANSWER 9 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:148844 HCAPLUS
DN 126:153646
TI **Oligonucleotide** derivs. preparation for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy
IN **Meyer, Rich B., Jr.**; Gamper, Howard B.; Kutyavin, Igor V.; Gall, Alexander A.; **Petrie, Charles R.**; **Tabone, John C.**; **Hurst, Gerald D.**
PA Microprobe Corporation, USA
SO PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9640711	A1	19961219	WO 1996-US9551	19960607
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TR, TT, UA, UG				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5849482	A	19981215	US 1995-485611	19950607 <--
	CA 2223584	AA	19961219	CA 1996-2223584	19960607
	AU 9661035	A1	19961230	AU 1996-61035	19960607
	AU 709924	B2	19990909		
	EP 842186	A1	19980520	EP 1996-918350	19960607
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 11509528	T2	19990824	JP 1996-501849	19960607
PRAI	US 1995-485611	A	19950607		
	US 1988-250474	B2	19880928 <--		
	US 1989-353857	B1	19890518		
	US 1991-748138	B1	19910821		
	US 1993-11482	B2	19930126		
	US 1993-49807	B1	19930420		
	US 1994-178733	B2	19940107		
	US 1994-226949	A2	19940627		
	US 1994-334490	A	19941104		
	WO 1996-US9551	W	19960607		

AB **Oligonucleotide** derivs. (ODNs) include a sequence that is complementary to a target sequence in single-stranded RNA, or single- or double-stranded DNA, and an alkylating function which after hybridization alkylates the target sequence. ODNs adapted for alkylating single-stranded RNA, such as mRNA, are complementary to the target sequence in the Watson Crick sense. ODNs adapted for alkylating double-stranded DNA have at least two alkylating functions and are

complementary to the target sequence in the Hoogsteen or reverse Hoogsteen sense. With these ODNs both strands of the target sequence are alkylated. A third class of ODNs have at least approx. 26 **nucleotide** units in a continuous sequence which are complementary to the target sequence of double-stranded DNA, and the alkylating function is covalently attached to a **nucleotide** unit in the continuous sequence. Alkylation or **crosslinking** with this class of ODNs occurs in the presence of a recombinase enzyme.

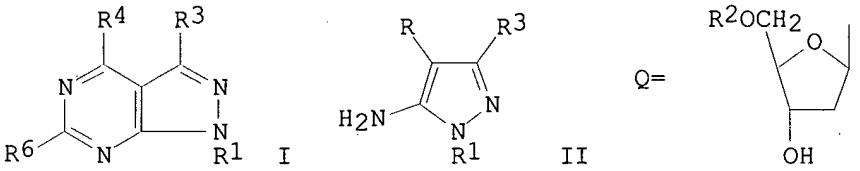
IT **129357-70-6P 129357-75-1P 129357-76-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT **137823-47-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn.; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

L146 ANSWER 10 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1990:532717 HCAPLUS
DN 113:132717
TI Preparation of pyrazolo[3,4-d]pyrimidine derivatives as intermediates for diagnostic **oligonucleotides**
IN **Petrie, Charles R.; Meyer, Rich B.**
PA Microprobe Corp., USA
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9003370	A1	19900405	WO 1989-US4184	19890926 <--
	W: JP				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	CA 1338379	A1	19960611	CA 1989-613651	19890927 <--
	US 5824796	A	19981020	US 1994-334490	19941104 <--
PRAI	US 1988-250474	A	19880928 <--		
	US 1989-353857	B1	19890518		
	US 1993-49807	B1	19930420		

OS MARPAT 113:132717
GI



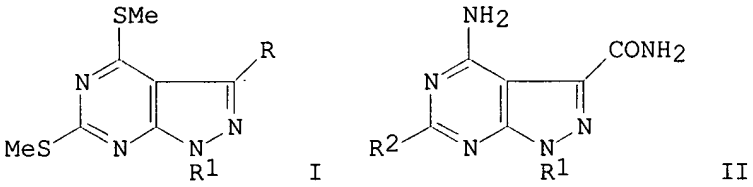
AB The title compds. [I; R1 = H, sugar moiety optionally substituted at its 3' or 5' position with mono-, di-, or triphosphate or a reactive **group** suitable for **nucleotide** bond formation; provided that when R3 = H, R1 .noteq. H; R3 = H, W(X)nA; W, X = chem. linker arm; A = intercalator, electrophilic **crosslinker**, **reporter group**; R4, R6 = H, OH, SH, alkylthio, NH2, NH(CH2)tNH2; n = 0,1; t = 0-12] were prepd. by (1) reaction of 5-aminopyrazole-4-carbonitriles (II; R = cyano; R1, R3 = as above) with a dialkoxymethyl carboxylate

followed by reaction with NH3 to give I (R4 = NH2), (2) reaction of II (R = CONH2; R1, R3 = as above) with a dialkoxymethyl carboxylate to give I (R4 = OH), or (3) reaction of II (R = cyano, CONH2; R1, R3 = as above) with an alkyl xanthate salt followed by an alkyl halide and oxidn. An **oligonucleotide** sequence contg. .gtoreq.1 of **labeled** I (R1 = sugar moiety as described above), particularly **labeled** with biotin, is used as DNA hybridization probe and as a kit for identifying target DNA sequence comprising the above **labeled** **oligonucleotide** complementary to the target DNA, a denaturation reagent, and a hybridization reaction mixt. (no data). Thus, 5-amino-1-(2-deoxy-3,5-di-O-toluoyl-.beta.-D-erythropentofuranosyl)-3-[(5-tritylamino)pentyl]pyrazole-4-carbonitrile was heated 5 h at 80-90.degree. with AcOCH2(OEt)2 and the intermediate syrup was treated 2 days at room temp. with methanolic NH3 to give 77% I [R1 = Q, R2 = R6 = H, R3 = (CH2)5NHCPh3, R4 = NH2]. This was phosphorylated by reaction with POCl3 in (MeO)3PO followed by hydrolysis with 0.1 M NH4HCO3 to give I [R1 = Q, R2 = (HO)2P(O), R3 = (CH2)5NHCPh3, R4 = NH2, R6 = H] which was hydrogenolyzed over Pd(OH)2/C in cyclohexadiene and then acylated with N-hydroxysuccinimidyl 6-biotinamidocaproate in DMF contg. Et3N to give I [R1 = Q, R2 = (HO)2P(O), R3 = 5-[(6-biotinamido)hexamido]pentyl, R4 = NH2, R6 = H].

IT **129357-75-1P 129357-76-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, in prepn. of biotin-**labeled** deoxyribofuranosylpyrazolopyrimidine **nucleotide**)

IT **129357-70-6P 129357-71-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as intermediate for **oligonucleotide** hybridization probes)

L146 ANSWER 11 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1989:173656 HCAPLUS
DN 110:173656
TI Synthesis and cytotoxic activity of 4,6-diaminopyrazolo[3,4-d]pyrimidine riboside and its 3-carbamoyl derivative
AU Garaeva, L. D.; Korbukh, I. A.; Dobrynin, Ya. V.; Nikolaeva, T. G.; Preobrazhenskaya, M. N.
CS VONTs, Moscow, USSR
SO Khim.-Farm. Zh. (**1988**), 22(7), 798-802
CODEN: KHFZAN; ISSN: 0023-1134
DT Journal
LA Russian
OS CASREACT 110:173656
GI



AB Treating **nucleoside** I (R = CN, R1 = .beta.-D-ribofuranosyl) with aq. NH3 and H2O2 gave 76% I (R = CONH2) which underwent amination by methanolic NH3 in an ampul to give 70% amino deriv. II (R2 = MeS) whose oxidn. by m-ClC6H4C(O)OOH gave 90% sulfone II (R2 = MeSO2). Treatment of the latter with NH3(l) in an ampul eliminated the methylsulfonyl group to give 70% diamino deriv. II (R2 = NH2). The most cytotoxic of the groups were the 4,6-bis(methylmercapto)- and **diaminonucleosides** contg.

a carbamoyl group.
IT **119952-34-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and amination of)
IT **70421-30-6P 116019-28-4P 119952-37-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and cytotoxic activity of)
IT **69259-11-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and oxidative ammonolysis of)
IT **74525-93-2P 119952-35-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and oxidn. to sulfone)
IT **73236-32-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L146 ANSWER 12 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1988:132231 HCAPLUS
DN 108:132231
TI A new method for synthesizing **acyclonucleosides**
AU Lazrek, H. B.; Taha, M. L.; Barascut, J. L.; Imbach, J. L.
CS Dep. Chim., Fac. Sci., Marrakech, Morocco
SO Nucleosides Nucleotides (**1987**), 6(1-2), 379-80
CODEN: NUNUD5; ISSN: 0732-8311
DT Journal
LA English
AB A **report** from the 7th round table symposium held in 1986. A new series of **acyclonucleoside** analogs of allopurinol, where the ribose moiety is replaced by the (2-hydroxyethoxy)methyl **group** was prepd. using phase-transfer catalysis.
IT **315-30-0DP**, Allopurinol, **acyclonucleoside** analogs
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L146 ANSWER 13 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1987:214304 HCAPLUS
DN 106:214304
TI **Labeled** (poly)**nucleotides**
IN Sugimoto, Nobutaka; Sato, Toyoki
PA Yuki Gosei Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61109797	A2	19860528	JP 1984-231847	19841101 <--

OS CASREACT 106:214304
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Purine base residues I (R, R1 = H, OH, NH2; X, X1, X2 = C, N; R2 = **fluorescence labeled** compds. (except 7-deazapurine) linked to (poly)**ribonucleotides** and (poly) **deoxyribonucleotides**, useful for identification and extn. of target genes (no data), were prepd. Thus, malononitrile was treated with hydrazine to give 3-(cyanomethyl)-4-cyano-5-aminopyrazole.

Cyclocondensation of this with HCHO and Raney Ni redn. of the resulting 4-amino-3-(cyanomethyl)pyrazolo[3,4-d]pyrimidine gave a purine analog II (R = H). Glycosidation of protected II (R = Ac) with 3,5-di-O-acetyl-.beta.-D-deoxyribosyl chloride gave, after deacetylation, a **nucleoside** III. Then a nuleoside deriv. IV (a deriv. of III) was condensed with C-C-T (C = cytosine; T = thymine) to give , after deprotection, Q-C-C-T-Q-C-C-T-Q-C-C-T-T (Z = **nucleotide** whose base residue after deprotection is II) (V). Then I was fluoroescence-**labeled** by dansyl chloride in acetone.

IT **38340-27-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and Raney Nickel redn. of)

IT **107296-14-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and benzoylation, dimethoxytritylation, and phosphorylation of)

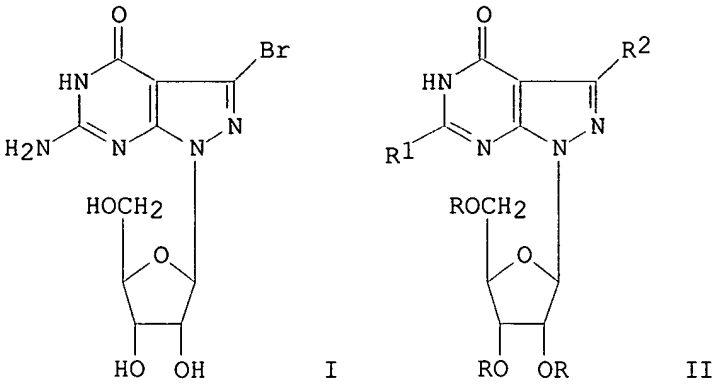
IT **46153-15-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and protection of)

L146 ANSWER 14 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1986:221087 HCAPLUS
DN 104:221087
TI Specificity of adenine binding to lima bean lectin
AU Roberts, David D.; Arjunan, Palanisamy; Townsend, Leroy B.; Goldstein, Irwin J.
CS Dep. Biol. Chem., Univ. Michigan, Ann Arbor, MI, 48109, USA
SO Phytochemistry (**1986**), 25(3), 589-93
CODEN: PYTCAS; ISSN: 0031-9422
DT Journal
LA English
AB The interactions between lima bean lectin (LBL) and adenine were examd. using a series of synthetic purine analogs. Binding was sensitive to modification at most positions of the purine ring, suggesting a high degree of specificity for adenine binding. Methylation of the 6 NH2-**group** to MeNH-, Me2N- and Me3N+-analogs progressively decreased the binding affinity. Compds. lacking the 6 NH2-**group** were not bound. Methylation of adenine at N1, N3 or N7 also inhibited binding, indicating specific interactions with these ring nitrogens. In contrast to the previous **report** that N9-substituted adenines, **nucleosides** and **nucleotides** were not bound (Roberts, D. D., et al., 1983), 9-methyl- and 9-benzyl-substituted adenines were bound to LBL with high affinity. Substitutions at C-2 and C-8 were tolerated and, in some cases, increased the affinity of binding to LBL. Heterotropic interactions between the adenine and 1,8-anilinonaphthalenesulfonate binding sites were also sensitive to modification of the purine ring. 2-Methylthioadenine and 4-aminopyrazolo[3,4-d]pyrimidine showed increased allosteric interaction with 1,8-anilinonaphthalenesulfonate binding, whereas several adenine analogs with a 9-p-nitrobenzyl substituent appeared to be neg. effectors of 1,8-anilinonaphthalenesulfonate binding.

IT **2380-63-4 6826-96-6**
RL: BIOL (Biological study)
(lima bean lectin binding by)

L146 ANSWER 15 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1985:437693 HCAPLUS
DN 103:37693
TI Synthesis and biological activity of 6-azacadeguomycin and certain 3,4,6-trisubstituted pyrazolo[3,4-d]pyrimidine **ribonucleosides**
AU **Petrie, Charles R., III**; Cottam, Howard B.; McKernan, Patricia A.; Robins, Roland K.; Revankar, Ganapathi R.
CS Cancer Res. Cent., Brigham Young Univ., Provo, UT, 84602, USA
SO J. Med. Chem. (**1985**), 28(8), 1010-16

CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
OS CASREACT 103:37693
GI



I II

AB High-temp. glycosylation of 3,6-dibromoallopurinol with 1-O-acetyl-2,3,5-tri-O-benzoyl-D-ribofuranose in the presence of BF3.cntdot.OEt2, followed by ammonolysis, provided **nucleoside** I. Similar glycosylation of either 3-bromo-4(5H)-oxopyrazolo[3,4-d]pyrimidin-6-yl Me sulfoxide or 6-amino-3-bromopyrazolo[3,4-d]pyrimidin-4(5H)-one, and subsequent ammonolysis, also gave I. Application of this glycosylation procedure to 6-(methylthio)-4(5H)-oxopyrazolo[3,4-d]pyrimidine-3-carboxamide gave the corresponding N-1 glycosyl deriv. II (R = Bz, R1 = SMe, R2 = CONH2)(III). Dethiation and debenzoylation of III provided an alternate route to the recently reported 3-carbamoylallopurinol **ribonucleoside**. Oxidn. of III and subsequent ammonolysis afforded 6-amino-1-.beta.-D-ribofuranosyl-4(5H)-oxopyrazolo[3,4-d]pyrimidine-3-carboxamide (IV) which on alk. treatment gave 6-azacadeguomycin II (R = H, R1 = NH2, R2 = CO2H). Acetylation of IV, followed by dehydration with phosgene, provided the versatile intermediate II (R = Ac, R1 = NH2, R2 = cyano) (V). Deacetylation of V gave 6-amino-1-.beta.-D-ribofuranosyl-4(5H)-oxopyrazolo[3,4-d]pyrimidine-3-carbonitrile. Reaction of V with H2S gave II (R = H, R1 = NH2, R2 = CSNH2). All of these compds. were tested in vitro against certain viruses and tumor cells. Among these compds., the guanosine analogs I and II (R = H, R1 = NH2, R2 = cyano) showed significant activity against measles in vitro and exhibited moderate antitumor activity in vitro against L1210 and P388 leukemia. 6-Azacadeguomycin and all other compds. were inactive against the viruses and tumor cells tested in vitro.

IT **5334-26-9 24521-76-4**
RL: RCT (Reactant)
(bromination of)

IT **96555-44-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and acetylation of)

IT **96555-41-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deblocking of)

IT **96555-37-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and debromination of)

IT **96555-45-2P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and dehydration of)

IT **96555-46-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and desulfuration or oxidn. of)

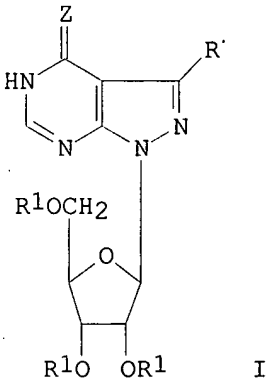
IT **96555-42-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and methylation of)

IT **96575-36-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reactions of)

IT **96555-43-0P 96575-35-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and ribosylation of)

IT **85426-74-0P 90914-46-8P 96555-38-3P**
96555-48-5P 96555-49-6P 96555-50-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L146 ANSWER 16 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1984:491391 HCAPLUS
DN 101:91391
TI Synthesis and biological activity of certain 3,4-disubstituted pyrazolo[3,4-d]pyrimidine **nucleosides**
AU Cottam, Howard B.; **Petrie, Charles R.**; McKernan, Patricia A.; Goebel, Richard J.; Dalley, N. Kent; Davidson, Richard B.; Robins, Roland K.; Revankar, Ganapathi R.
CS Cancer Res. Cent., Brigham Young Univ., Provo, UT, 84602, USA
SO J. Med. Chem. (**1984**), 27(9), 1119-27
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
GI



I

AB Several title **ribonucleosides**, e.g., I [R = Br, cyano, SMe, NH2, NHMe, NMe2, CONH2, CSNH2, C(:NH)NH2, C(:NOH)NH2; R1 = H, Bz; Z = O, S], were prepd. I (R = Br, cyano; R1 = Bz; Z = O), obtained by glycosylation of the corresponding heterocycles with 1-O-acetyl-2,3,5-tri-O-benzoyl-D-ribofuranose, were the key intermediates. The structural assignment of I (R = cyano, R1 = H, Z = O) was made by single crystal x-ray anal. All the compds. were tested in vitro against certain viruses, tumor cells, and the parasite Leishmania tropica. I [R = CSNH2, C(:NH)NH2; R1 = H; Z = O] showed significant activity against Para 3 virus and were potent inhibitors of growth of L1210 and P388 leukemia. I (R = cyano, R1 = H, Z = S) showed the most significant broad-spectrum antiviral and antitumor

activity. I (R = Br, R1 = H, Z = O) was more active than allopurinol riboside against L. tropica within human macrophages.

IT **90914-42-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and amination of, with ammonia)

IT **90914-37-7P 90914-43-5P 90914-51-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and debenzoylation of)

IT **90914-31-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and debromination of)

IT **90914-32-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and desulfuration of)

IT **90914-30-0P 90914-33-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reactions of)

IT **16220-07-8P 90914-34-4P 90914-36-6P**
90914-38-8P 90914-39-9P 90914-40-2P
90914-44-6P 90914-46-8P 90914-47-9P
90914-48-0P 90914-49-1P 90914-50-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT **90914-52-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, attempted)

IT **5387-84-8 54738-73-7 83255-86-1**
RL: RCT (Reactant)
(ribofuranosylation of)

L146 ANSWER 17 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1982:7014 HCAPLUS
DN 96:7014
TI The **nucleosides** of substituted pyrazolo(3,4-d)pyrimidines
AU Korbukh, I. A.; Bulychev, Yu. N.; Yakunina, N. G.; Preobrazhenskaya, M. N.
CS All-Union Cancer Res. Cent., Moscow, 115478, USSR
SO Nucleic Acids Symp. Ser. (**1981**), 9, 73-5
CODEN: NACSD8
DT Journal
LA English
AB The 1-.beta.-D-ribosides of 4-, 3,4-, 4,6- and 3,4,6-substituted pyrazolo[3,4-d]pyrimidines were prepd. by regioselective glycosylation and subsequent transformations.

IT **5418-10-0 6288-89-7 73236-31-4**
78710-14-2 80117-79-9
RL: RCT (Reactant)
(glycosylation of, with ribofuranose tetraacetate)

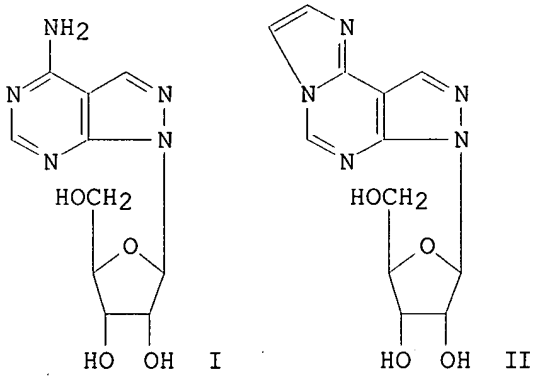
IT **60355-66-0P 73236-32-5P 76690-43-2P**
78710-16-4P 80117-80-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deacetylation of)

IT **60355-67-1P 69259-11-6P 74525-92-1P**
78710-19-7P 80117-81-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reactions of)

IT **60355-67-1P 69259-11-6P 74516-76-0P**
74516-77-1P 74516-78-2P 74516-79-3P
74516-80-6P 74516-81-7P 74516-82-8P
74516-84-0P 74525-92-1P 74525-93-2P
74525-95-4P 76690-46-5P 78710-19-7P
78710-20-0P 78710-21-1P 78710-22-2P
78710-23-3P 80117-82-4P 80117-83-5P
RL: SPN (Synthetic preparation); PREP (Preparation)

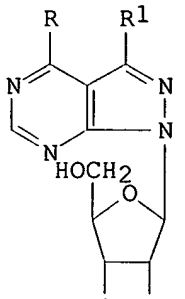
(prepn. of)

L146 ANSWER 18 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1981:620260 HCAPLUS
DN 95:220260
TI Synthesis of certain **fluorescent** tricyclic **nucleosides** derived from pyrazolo[3,4-d]pyrimidine **nucleosides**
AU Bhat, Ganapati A.; Townsend, Leroy B.
CS Dep. Med. Chem., Univ. Michigan, Ann Arbor, MI, 48109, USA
SO J. Chem. Soc., Perkin Trans. 1 (**1981**), (9), 2387-93
CODEN: JCPRB4; ISSN: 0300-922X
DT Journal
LA English
GI



AB The prepn. is described of tricyclic **nucleosides** with a dihydroimidazole, imidazole, triazole, or tetrazole ring fused to the pyrazolopyrimidine ring system in an angular position. E.g., cyclocondensation reaction of the **nucleoside** I with ClCH2CHO (H2O, NaOAc, pH 4.5, 80.degree., 3 h) gave the imidazo deriv. II (64%). The UV and **fluorescence** spectra of the tricyclic **nucleosides** are reported.
IT **64372-76-5**
RL: PROC (Process)
(cyclization and acetalization of)
IT **3258-05-7**
RL: RCT (Reactant)
(cycloamination reactions of, tricyclic **nucleosides** by)

L146 ANSWER 19 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1981:525862 HCAPLUS
DN 95:125862
TI Pyrazolopyrimidine **nucleosides**. 12. Synthesis and biological activity of certain pyrazolo[3,4-d]pyrimidine **nucleosides** related to adenosine
AU Bhat, Ganapati A.; Montero, Jean Louis G.; Panzica, Raymond P.; Wotring, Linda L.; Townsend, Leroy B.
CS Coll. Pharm., Univ. Michigan, Ann Arbor, MI, 48109, USA
SO J. Med. Chem. (**1981**), 24(10), 1165-72
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
GI



I, R=NH_2, R^1=H
II, R=N=$CHNMe_2$, R^1=H
III, R=NH_2 R^1=$CONH_2$

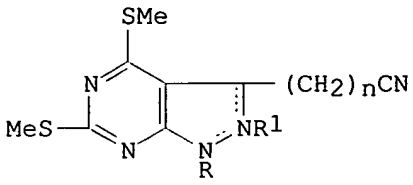
AB Twenty-six title compds., 13 of which were synthesized, were tested for antitumor activity against mouse L1210 leukemia cells both in vitro and in vivo and against P388 leukemia cells in vivo. I [**3258-05-7**] and II [78586-44-4] showed the greatest inhibition of growth of L1210 cells in vitro, with the activity of II probably resulting from the formation of I by hydrolysis in the aq. medium. Any alteration of the C4-amino substituent of I resulted in a decrease or loss of antitumor activity. Certain substitutions at the C3 position of I resulted in compds. with a better antitumor activity than I. III [**55559-56-3**] was the most active compd. giving an increase in life-span of 136% (vs. 48% for I) in L1210-bearing mice and having a significant lethal effect on L1210 cells in vitro.

IT **16220-07-8 54524-71-9 55559-50-7**
55559-51-8 55559-52-9 55559-53-0
55559-54-1 55559-55-2 55559-56-3
55559-57-4 64372-72-1 64372-77-6
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antitumor activity of, structure in relation to)

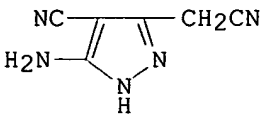
IT **3258-05-7P 60355-67-1P 64372-76-5P**
70421-26-0P 78586-40-0DP, derivs. **78586-40-0P**
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. and antitumor activity of, structure in relation to)

IT **64372-69-6**
RL: RCT (Reactant)
(redn. and chlorination of)

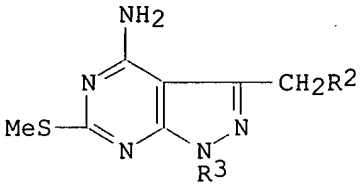
L146 ANSWER 20 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1981:498198 HCAPLUS
DN 95:98198
TI Synthesis of derivatives of pyrazolo[3,4-d]pyrimidin-3-ylacetic acid and their **nucleosides**
AU Bulychev, Yu. N.; Korbukh, I. A.; Preobrazhenskaya, M. N.
CS Onkol. Nauchn. Tsentr, Moscow, 115478, USSR
SO Khim. Geterotsikl. Soedin. (**1981**), (4), 536-45
CODEN: KGSSAQ; ISSN: 0453-8234
DT Journal
LA Russian
GI



I



II



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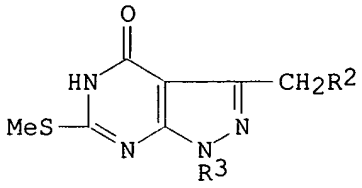

IV

AB Pyrazolopyrimidine I (R = R1 = H, n = 1), prepd. in 87% yield from II by cyclocondensation with CS2, hydrolysis, and methylation, were ribosylated by 1,2,3,5-tetra-O-acetyl-.beta.-D-ribofuranose to give I (R = 2,3,5-tri-O-acetyl-.alpha.,.beta.-D-ribofuranosyl, R1 = H, n = 1; R = H, R1 = 2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl, n = 1). Addnl. obtained were 54 and 40% III (R2 = CO2NH4, CN, R3 = .beta.-D-ribofuranosyl) and 20 and 53% IV (R2 = CN, CONH2, R3 = .beta.-D-ribofuranosyl). Treatment of the 6-methylthio derivs. with morpholine and piperidine gave the corresponding amino derivs.

IT **78710-13-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and methylation of)

IT **78710-14-2P 78710-16-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reactions of)

IT **78710-15-3P 78710-17-5P 78710-19-7P**
78710-20-0P 78710-21-1P 78710-22-2P
78710-23-3P 78724-02-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L146 ANSWER 21 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1979:87798 HCAPLUS
DN 90:87798
TI **Nucleosides** of pyrazolopyrimidines
AU Blanko, F. F.; Goryunova, O. V.; Bulychev, Yu. N.; Korbukh, I. A.; Preobrazhenskaya, M. N.
CS USSR
SO Novosti Khimii Nukleozidov i Nukleotidov (**1978**) 30-2
From: Ref. Zh., Khim. 1978, Abstr. No. 18E94
DT Journal
LA Russian
AB Title only translated.
IT **60355-67-1P 69259-11-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L146 ANSWER 22 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN **1975:572354** HCAPLUS
DN **83:172354**
TI Metabolism of allopurinol-6-**14C**. Lack of incorporation of allopurinol into **nucleic** acids
AU Nelson, Donald J.; Elion, Gertrude B.
CS Wellcome Res. Lab., Research Triangle Park, N. C., USA
SO Biochem. Pharmacol. (**1975**), 24(11-12), 1235-7

CODEN: BCPCA6
DT Journal
LA English
AB Anal. of the radioactive species present in hydrolyzates of RNA from intestine of rats after administration of 6-**14C-labeled** allopurinol [**315-30-0**] (50 mg/kg, 2.4 mCi/mmole, i.v.) confirmed the lack of incorporation of allopurinol or its metabolites into **nucleic** acids.
IT **315-30-0**
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(metab. of, **nucleic** acids in relation to)

L146 ANSWER 23 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1975:171339 HCAPLUS
DN 82:171339
TI Pyrazolopyrimidine **nucleosides**. VII. Synthesis of certain pyrazolo[3,4-d]pyrimidine **nucleosides** related to the **nucleoside** antibiotics toyocamycin and sangivamycin
AU Earl, Robert A.; Townsend, Leroy B.
CS Dep. Chem., Univ. Utah, Salt Lake City, Utah, USA
SO J. Heterocycl. Chem. (**1974**), 11(6), 1033-9
CODEN: JHTCAD
DT Journal
LA English
AB The condensation of 4-acetamido-3-cyanopyrazolo[3,4-d]pyrimidine with 2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl chloride, which evolved copius amts. of HCN, was followed by treatment with NaOMe in MeOH to give Me 4-amino-1-(.beta.-D-ribofuranosyl)pyrazolo[3,4-d]pyrimidine-3-formimidate monohydrate (I). The formimidate function of I was highly reactive and was readily converted into the corresponding carboxamidine, carboxamidoxime, and carboxamidrazone. Treatment of I with NaHS gave a high yield of the thiocarboxamide, which was then converted into 4-amino-3-cyano-1-(.beta.-D-ribofuranosyl)pyrazolo[3,4-d]pyrimidine. Aq. base transformed I into 4-amino-1-(.beta.-D-ribofuranosyl)pyrazolo[3,4-d]pyrimidine-3-carboxamide while more vigorous basic hydrolysis gave the corresponding carboxylic acid (II) in nearly quant. yield. Decarboxylation of II in hot sulfolane gave 68% 4-amino-1-(.beta.-D-ribofuranosyl)pyrazolo[3,4-d]pyrimidine which established the site of ribosylation and anomeric configuration for all **nucleosides** reported in this investigation.
IT **6826-96-6**
RL: RCT (Reactant)
(acetylation of)
IT **55559-50-7P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reactivity of)
IT **3258-05-7P 55559-51-8P 55559-52-9P**
55559-53-0P 55559-54-1P 55559-55-2P
55559-56-3P 55559-57-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L146 ANSWER 24 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1975:41629 HCAPLUS
DN 82:41629
TI Synthesis of purine **nucleotides** in human and leukemic cells. Interaction of 6-mercaptopurine and allopurinol. 1
AU Wilmanns, W.
CS Dep. Intern. Med. II, Univ. Clin., Tuebingen, Ger.
SO Adv. Exp. Med. Biol. (**1974**), 41A, 147-58
CODEN: AEMBAP
DT Journal
LA English

AB In a study of the effect of 6-mercaptopurine (I) on the tetrahydrofolate-dependent activation of formate (II)-**14C** in relation to the net de novo synthesis of purine **nucleotides** in cell-free exts. of normal and leukemic leukocytes the incorporation of II-**14C** into **nucleotides** could be detected only if all components necessary for the de novo pathway were added to the incubation mixt. together with the substrates and cofactors of the II-activating system. The purines identified were hypoxanthine and adenine. The activating enzyme, tetrahydrofolate formylase (III), was found in normal and leukemic leukocytes, the highest activities being observed in immature blast cells of acute leukemia. By detn. of the II-**14C** incorporation, a measurable net de novo synthesis of **nucleotides** was detected only in immature leukemic cells. If different patients with acute leukemia were studied, the amt. of II-**14C** incorporation was correlated to the activity of the III. In addn., the rate of II-**14C** incorporation into **nucleotides** depended on the concn. of tetrahydrofolate in the incubation mixt. It could be assumed that the rate of de novo synthesis of **nucleotides** was controlled by the 1st reaction of this pathway (involving phosphoribosylpyrophosphate amidotransferase) and the amt. of N10-formyltetrahydrofolate available for incorporation of activated formyl groups into the C-2 and C-8 positions of the purine ring. Although I in a rather high concn. (1.5 .times. 10-3M) had only a small inhibitory effect on III in the leukemic blast cells of patients with acute leukemia, inhibition of III by I was markedly increased by the addn. of allopurinol (IV), whereas IV alone had no effect. This was explained by the fact that IV, by inhibiting xanthine oxidase, reduced the inactivation of I to 6-thiouric acid. Autoradiog. following the chromatog. sepn. of blast-cell hypoxanthine-**14C** and IMP-**14C**, formed by hypoxanthine-guanine phosphoribosyltransferase (V), showed that V was inhibited by I. The I concn. necessary for inhibition of this reaction was about 0.1 of that in the III reaction. As V was also specific for I, the latter was transformed to thioinosinic acid, which was regarded as the metabolically active inhibitor of the de novo synthesis of purine. The addn. of IV affected neither the inhibition of the V by I nor the conversion of I to thioinosinic acid by the same enzyme. It was unlikely that this was due to a lack of xanthine oxidase in the cells investigated. It was concluded that a conversion of I to the **monophosphoribonucleotide** was not necessary for the inhibition of II activation. Only the inhibitory effect of I on this reaction, which was important for the de novo synthesis of **nucleotides**, was potentiated by IV. The competition of both substances with xanthine oxidase was assumed to be the biochem. basis for this interaction. Thus, the inactivation of I by oxidn. to thiouric acid could be prevented by IV. The clin. observation of a higher cytotoxic effect of I treatment, if patients received IV at the same time, was explained by these results.

IT **315-30-0**
RL: BIOL (Biological study)
(leukemia response to, purine **nucleotide** formation in, mercaptopurine in relation to)

L146 ANSWER 25 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1968:417563 HCAPLUS
DN 69:17563
TI Effects of 4-aminopyrazolo(3,4-d)pyrimidine in combination with guanine on **nucleic** acid and protein synthesis by Ehrlich ascites cells in culture. Biochemical and cytochemical analyses
AU Schachtschabel, D. O.; Killander, D.; Zetterberg, A.; McCarthy, R. E.; Foley, G. E.
CS Med. Nobel Inst., Karolinska Inst., Stockholm, Swed.
SO Exp. Cell Res. (**1968**), 50(1), 73-80
CODEN: ECREAL
DT Journal

LA English
AB Quant. microspectrophotometric and microinterferometric analyses in combination with biochem. methods were used to examine the effects of 4-aminopyrazolo(3,4-d)pyrimidine (I) (5 .times. 10-6M) in combination with guanine (2 .times. 10-4M) on the synthesis of DNA, RNA, and protein in asynchronously growing Ehrlich ascites cells in culture. Exposure to such concns. of I + guanine resulted in a nonlethal inhibition of cell multiplication. Pulse **labeling** with thymidine-**14C**, uridine-**14C**, and leucine-1-**14C** in the presence of I + guanine revealed an exponential decline in the per cell rate of DNA synthesis, while the per cell rate of RNA synthesis, as adjudged by uridine-**14C** incorporation, was not significantly inhibited, and the per cell rate of protein synthesis was inhibited only .apprx.50%. Detn. of the cellular content of DNA, RNA, and protein by cytochem. population analyses revealed an accumulation of cells in G1 or early S-phase in I + guanine-treated cultures. These viable, but nondividing cells continued to incorporate uridine-**14C** and leucine-**14C**, but there was no net increase in either RNA or protein per cell; thus continued synthesis must be limited to RNA and protein which is constantly in the process of degradation and resynthesis. I + guanine may exert an inhibitory effect by interference with the synthesis and pool sizes of intracellular purine **nucleotides**.
IT **2380-63-4**
RL: BIOL (Biological study)
(**nucleic** acid and protein formation by carcinoma in response to guanine and)

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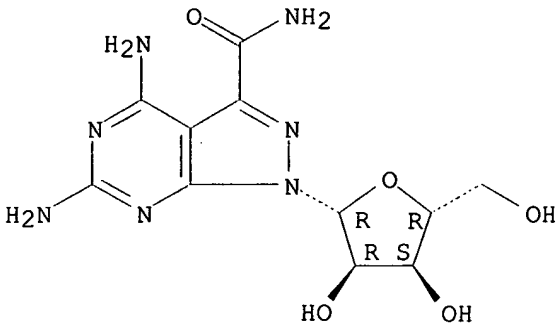
Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d ide can tot l148

L148 ANSWER 1 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **119952-37-3** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4,6-diamino-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H15 N7 O5
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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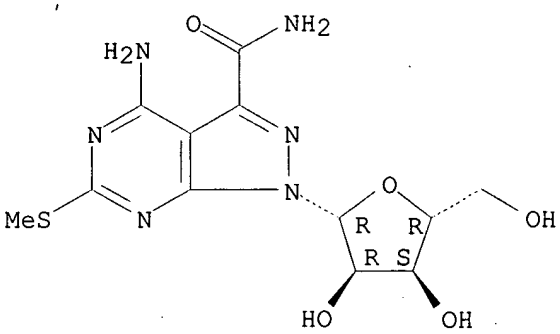
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 110:173656

L148 ANSWER 2 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **119952-35-1** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4-amino-6-(methylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C12 H16 N6 O5 S
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

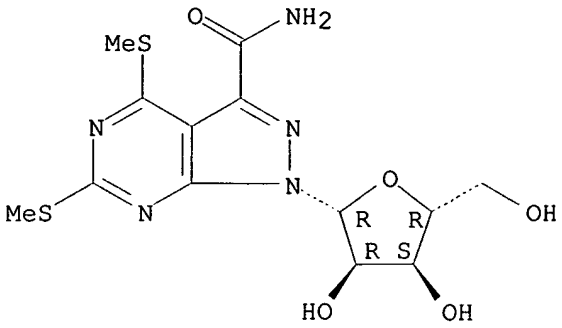
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 110:173656

L148 ANSWER 3 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **119952-34-0** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4,6-bis(methylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H17 N5 O5 S2
SR CA

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



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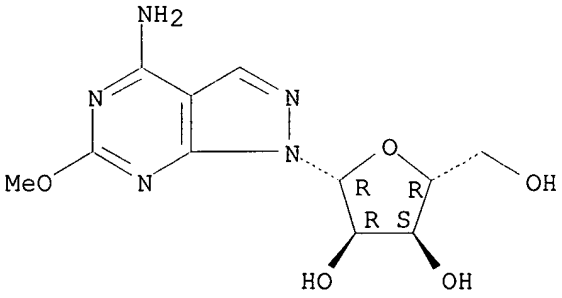
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 110:173656

L148 ANSWER 4 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **116019-28-4** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine, 6-methoxy-1-.beta.-D-ribofuranosyl-
(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C11 H15 N5 O5**
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



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2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

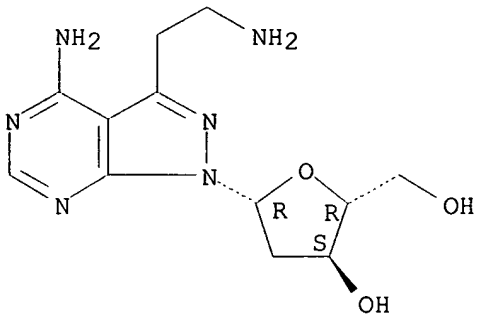
REFERENCE 1: 110:173656

REFERENCE 2: 109:93498

L148 ANSWER 5 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN **107296-14-0** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-ethanamine, 4-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C12 H18 N6 O3**
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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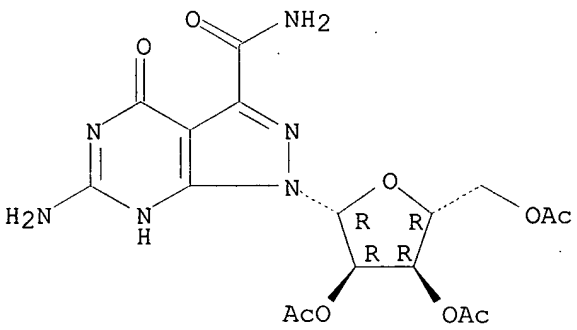
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 106:214304

L148 ANSWER 6 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **96555-45-2** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 6-amino-4,5-dihydro-4-oxo-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H20 N6 O9
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



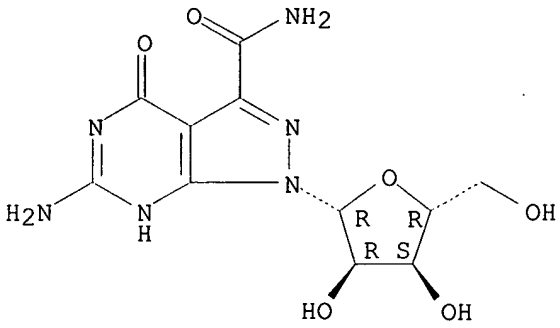
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 103:37693

L148 ANSWER 7 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **96555-44-1** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 6-amino-4,5-dihydro-4-oxo-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H14 N6 O6
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.

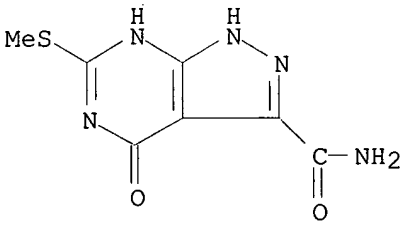


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 103:37693

L148 ANSWER 8 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **96555-43-0** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4,5-dihydro-6-(methylthio)-4-oxo- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C7 H7 N5 O2 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)



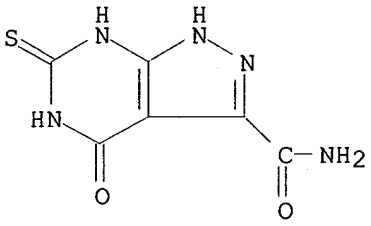
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 103:37693

L148 ANSWER 9 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN **96555-42-9** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4,5,6,7-tetrahydro-4-oxo-6-thioxo- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C6 H5 N5 O2 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)



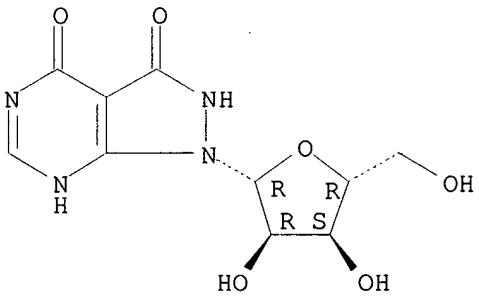
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 103:37693

L148 ANSWER 10 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **90914-52-6** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3,4(2H,5H)-dione, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C10 H12 N4 O6
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



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2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

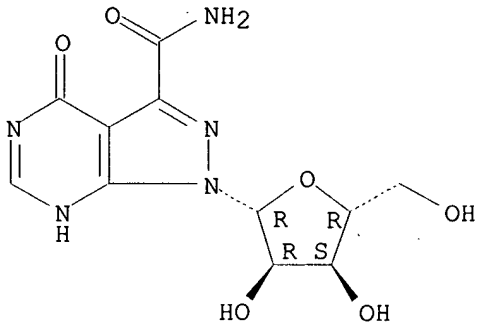
REFERENCE 1: 113:97956

REFERENCE 2: 101:91391

L148 ANSWER 11 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **90914-46-8** REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4,5-dihydro-4-oxo-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H13 N5 O6
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



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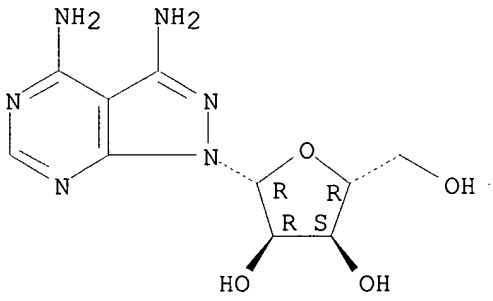
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 103:37693

REFERENCE 2: 101:91391

L148 ANSWER 12 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **90914-44-6** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3,4-diamine, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C10 H14 N6 O4**
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



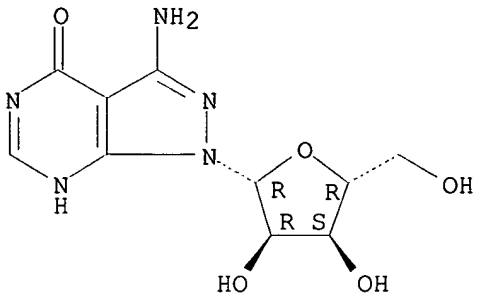
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 101:91391

L148 ANSWER 13 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **90914-38-8** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 3-amino-1,5-dihydro-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C10 H13 N5 O5**
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

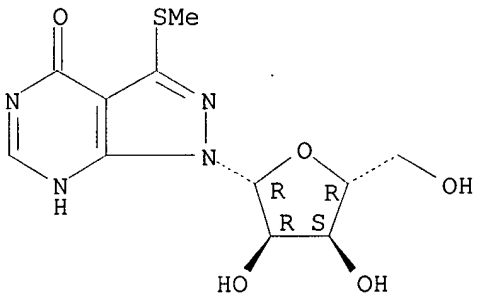
2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 110:165600

REFERENCE 2: 101:91391

L148 ANSWER 14 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **90914-32-2** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-3-(methylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C11 H14 N4 O5 S**
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



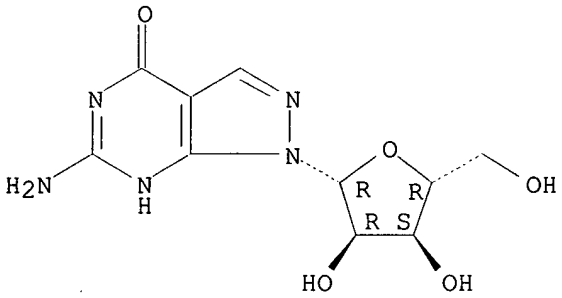
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 101:91391

L148 ANSWER 15 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **85426-74-0** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1,5-dihydro-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol, 6-amino-1-.beta.-D-ribofuranosyl- (6CI)
OTHER NAMES:
CN 7-Deaza-8-azaguanosine
FS STEREOSEARCH
MF **C10 H13 N5 O5**
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, MEDLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
9 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 126:43598

REFERENCE 2: 117:204404

REFERENCE 3: 113:172618

REFERENCE 4: 113:59760

REFERENCE 5: 112:77867

REFERENCE 6: 112:56530

REFERENCE 7: 106:207230

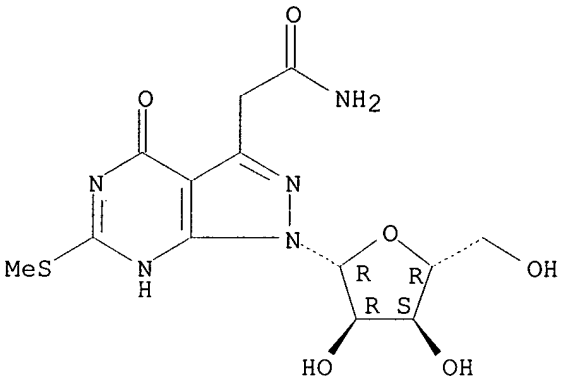
REFERENCE 8: 103:37693

REFERENCE 9: 98:179811

L148 ANSWER 16 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **78710-23-3** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-acetamide, 4,5-dihydro-6-(methylthio)-4-oxo-

1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H17 N5 O6 S
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

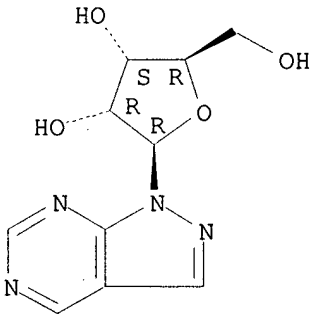
2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 96:7014

REFERENCE 2: 95:98198

L148 ANSWER 17 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **78586-40-0** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine, 1-.beta.-D-ribofuranosyl- (6CI, 9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C10 H12 N4 O4
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

6 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 123:52110

REFERENCE 2: 106:46285

REFERENCE 3: 98:100752

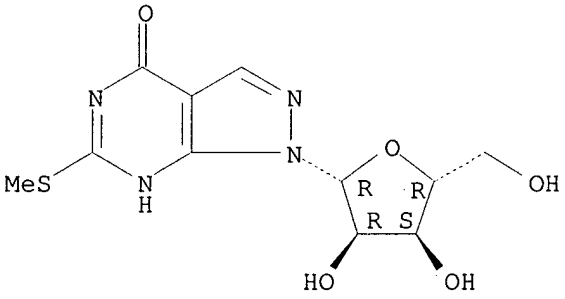
REFERENCE 4: 97:72700

REFERENCE 5: 96:45864

REFERENCE 6: 95:125862

L148 ANSWER 18 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **76690-46-5** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-6-(methylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C11 H14 N4 O5 S**
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 112:56530

REFERENCE 2: 109:93507

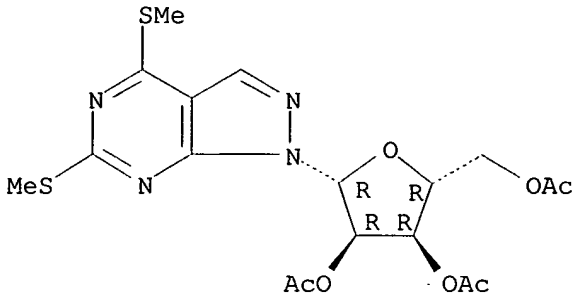
REFERENCE 3: 96:7014

REFERENCE 4: 95:180745

REFERENCE 5: 94:103745

L148 ANSWER 19 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **76690-43-2** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4,6-bis(methylthio)-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C18 H22 N4 O7 S2
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1967 TO DATE)
3 REFERENCES IN FILE CAPLUS (1967 TO DATE)

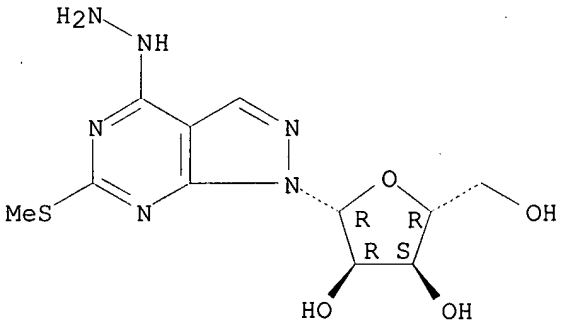
REFERENCE 1: 109:93507

REFERENCE 2: 96:7014

REFERENCE 3: 94:103745

L148 ANSWER 20 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **74525-95-4** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-6-(methylthio)-1-.beta.-D-ribofuranosyl-, hydrazone (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H16 N6 O4 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 109:93498

REFERENCE 2: 96:7014

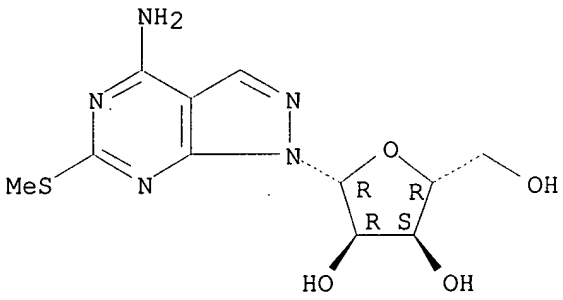
REFERENCE 3: 95:180745

REFERENCE 4: 94:103745

REFERENCE 5: 93:88460

L148 ANSWER 21 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **74525-93-2** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine, 6-(methylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H15 N5 O4 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1967 TO DATE)
8 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 110:173656

REFERENCE 2: 109:93507

REFERENCE 3: 109:93498

REFERENCE 4: 98:179811

REFERENCE 5: 96:7014

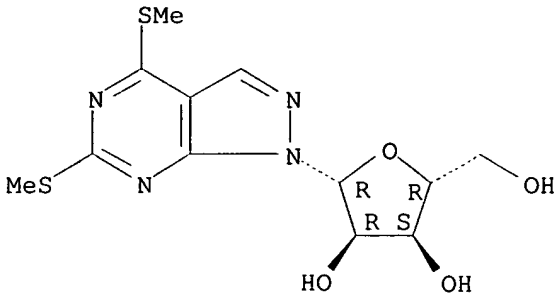
REFERENCE 6: 95:180745

REFERENCE 7: 94:103745

REFERENCE 8: 93:88460

L148 ANSWER 22 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **74525-92-1** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4,6-bis(methylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C12 H16 N4 O4 S2
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1967 TO DATE)
6 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 112:56530

REFERENCE 2: 109:93498

REFERENCE 3: 96:7014

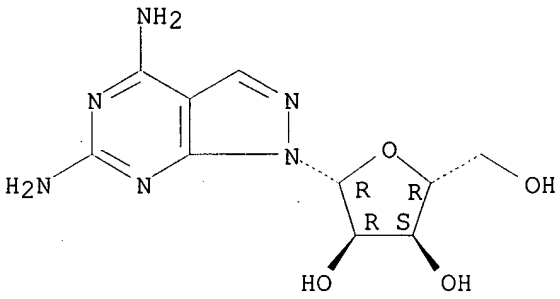
REFERENCE 4: 95:180745

REFERENCE 5: 94:103745

REFERENCE 6: 93:88460

L148 ANSWER 23 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **70421-30-6** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-4,6-diamine, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4,6-diamino-1-.beta.-D-ribofuranosyl- (6CI)
FS STEREOSEARCH
MF **C10 H14 N6 O4**
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

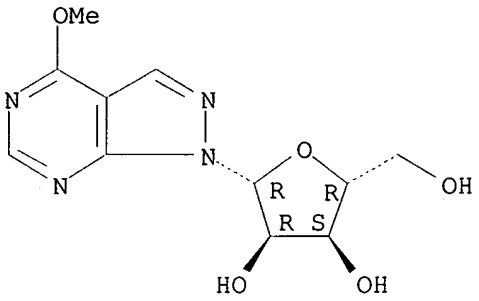
2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 110:173656

REFERENCE 2: 91:15775

L148 ANSWER 24 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **70421-26-0** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-methoxy-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H14 N4 O5
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1967 TO DATE)
3 REFERENCES IN FILE CAPLUS (1967 TO DATE)

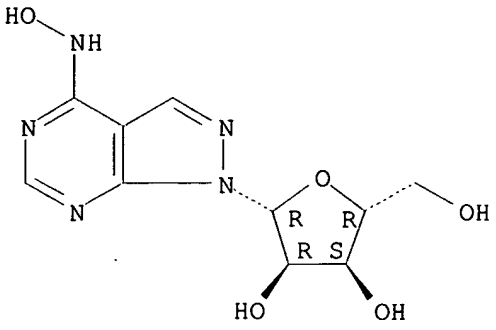
REFERENCE 1: 99:185380

REFERENCE 2: 95:125862

REFERENCE 3: 91:15775

L148 ANSWER 25 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **64372-77-6** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-1-.beta.-D-ribofuranosyl-, oxime (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C10 H13 N5 O5**
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

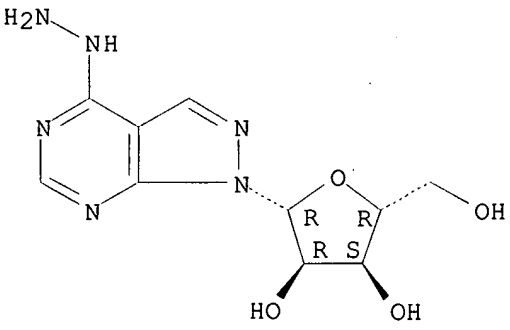
2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 95:125862

REFERENCE 2: 87:184865

L148 ANSWER 26 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **64372-76-5** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1-.beta.-D-ribofuranosyl-, hydrazone (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C10 H14 N6 O4**
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 97:72700

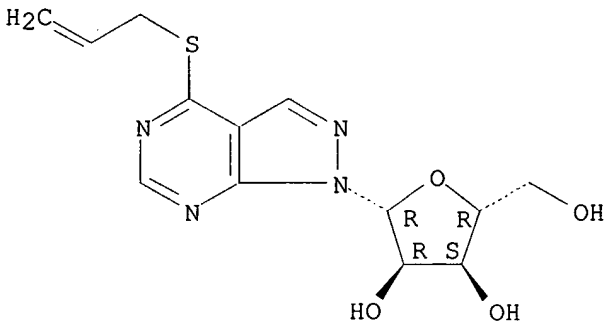
REFERENCE 2: 95:220260

REFERENCE 3: 95:125862

REFERENCE 4: 87:184865

L148 ANSWER 27 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **64372-72-1** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-(2-propenylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H16 N4 O4 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 106:46285

REFERENCE 2: 98:100752

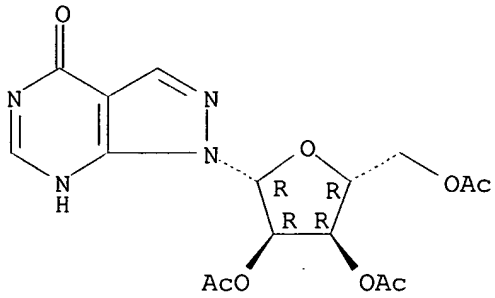
REFERENCE 3: 96:45864

REFERENCE 4: 95:125862

REFERENCE 5: 87:184865

L148 ANSWER 28 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **64372-69-6** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H18 N4 O8
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 99:158770

REFERENCE 2: 97:163399

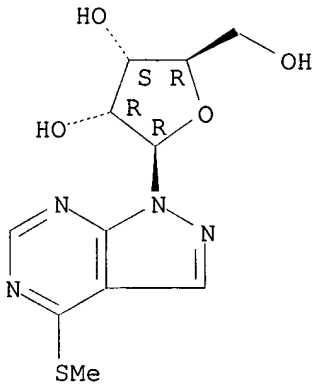
REFERENCE 3: 95:125862

REFERENCE 4: 95:62573

REFERENCE 5: 87:184865

L148 ANSWER 29 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **60355-67-1** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-(methylthio)-1-.beta.-D-ribofuranosyl-
(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H14 N4 O4 S
LC STN Files: BEILSTEIN*, CA, CANCERLIT, CAPLUS, MEDLINE, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

18 REFERENCES IN FILE CA (1967 TO DATE)
18 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 123:52110

REFERENCE 2: 111:90073

REFERENCE 3: 110:165600

REFERENCE 4: 109:142123

REFERENCE 5: 106:46285

REFERENCE 6: 106:27490

REFERENCE 7: 102:197604

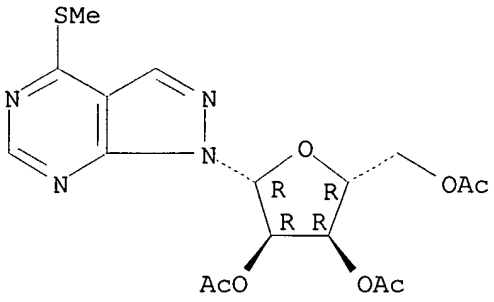
REFERENCE 8: 102:43384

REFERENCE 9: 98:100752

REFERENCE 10: 97:72700

L148 ANSWER 30 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **60355-66-0** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-(methylthio)-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H20 N4 O7 S
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 97:163399

REFERENCE 2: 96:7014

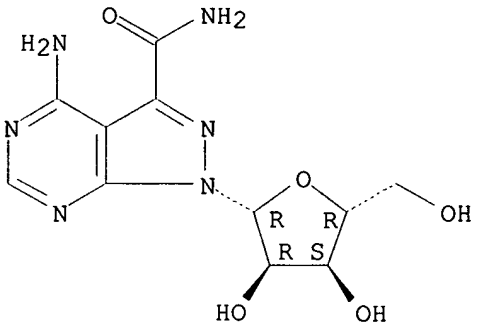
REFERENCE 3: 94:103745

REFERENCE 4: 85:108923

L148 ANSWER 31 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **55559-56-3** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4-amino-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
OTHER NAMES:

CN 6-Azasangivamycin
FS STEREOSEARCH
MF C11 H14 N6 O5
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1967 TO DATE)
6 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 95:125862

REFERENCE 2: 91:168263

REFERENCE 3: 91:117147

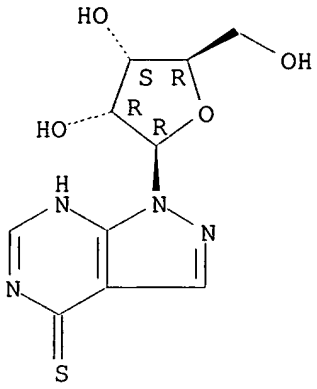
REFERENCE 4: 85:177891

REFERENCE 5: 84:159532

REFERENCE 6: 82:171339

L148 ANSWER 32 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **54524-71-9** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidine-4-thione, 1,5-dihydro-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 8-Aza-6-mercapto-7-deazapurine riboside
FS STEREOSEARCH
MF C10 H12 N4 O4 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, MEDLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

19 REFERENCES IN FILE CA (1967 TO DATE)
19 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 123:52110

REFERENCE 2: 114:74707

REFERENCE 3: 110:165600

REFERENCE 4: 106:81433

REFERENCE 5: 106:46285

REFERENCE 6: 102:214677

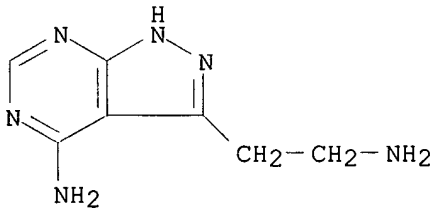
REFERENCE 7: 102:105763

REFERENCE 8: 102:199

REFERENCE 9: 101:187866

REFERENCE 10: 99:133327

L148 ANSWER 33 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **46153-15-5** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-ethanamine, 4-amino- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF **C7 H10 N6**
CI COM
LC STN Files: CA, CAPLUS, CASREACT

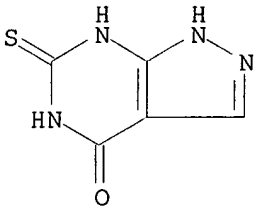


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 106:214304

L148 ANSWER 34 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **24521-76-4** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5,6,7-tetrahydro-6-thioxo- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol, 6-mercapto- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 1H-Pyrazolo[3,4-d]pyrimidine-4,6(5H,7H)-dione, 6-thio-
CN 4-Hydroxy-6-mercaptopyrazolo[3,4-d]pyrimidine
CN B 103U
FS 3D CONCORD
DR 3323-96-4
MF C5 H4 N4 O S
CI COM
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, EMBASE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

17 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
17 REFERENCES IN FILE CAPLUS (1967 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:180778

REFERENCE 2: 134:17496

REFERENCE 3: 133:357185

REFERENCE 4: 133:274164

REFERENCE 5: 133:36032

REFERENCE 6: 132:115157

REFERENCE 7: 129:182042

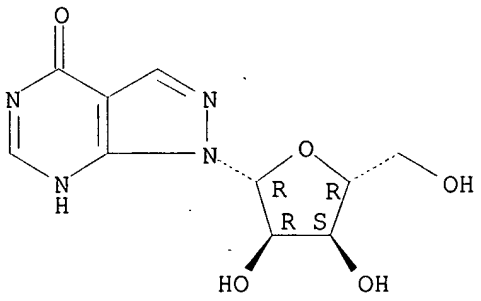
REFERENCE 8: 129:77920

REFERENCE 9: 126:137636

REFERENCE 10: 120:106914

L148 ANSWER 35 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **16220-07-8** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-1-.beta.-D-ribofuranosyl- (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 4-Hydroxy[3,4-d]pyrazolopyrimidine riboside
CN Allopurinol ribonucleoside
CN Allopurinol riboside
CN Allopurinol-1-ribonucleoside
FS STEREOSEARCH
MF C10 H12 N4 O5
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMINFORMRX, DDFU, DRUGNL, DRUGU, DRUGUPDATES, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



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97 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
97 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 134:25078

REFERENCE 2: 131:29442

REFERENCE 3: 128:189094

REFERENCE 4: 125:53806

REFERENCE 5: 124:25693

REFERENCE 6: 123:52110

REFERENCE 7: 122:230098

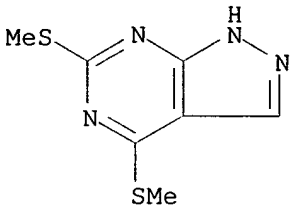
REFERENCE 8: 120:152877

REFERENCE 9: 120:107695

REFERENCE 10: 119:245177

L148 ANSWER 36 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN **6288-89-7** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4,6-bis(methylthio)- (6CI, 8CI, 9CI) (CA INDEX NAME)
FS 3D CONCORD
MF **C7 H8 N4 S2**
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

21 REFERENCES IN FILE CA (1967 TO DATE)
21 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 132:177005

REFERENCE 2: 125:58997

REFERENCE 3: 125:34025

REFERENCE 4: 124:117250

REFERENCE 5: 122:239865

REFERENCE 6: 120:217524

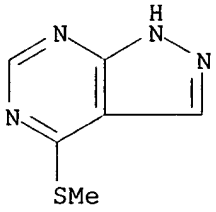
REFERENCE 7: 115:208428

REFERENCE 8: 114:102664

REFERENCE 9: 112:198289

REFERENCE 10: 112:56530

L148 ANSWER 37 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **5418-10-0** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-(methylthio)- (6CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 4-Methylthiopyrazolo[3,4-d]pyrimidine
FS 3D CONCORD
MF **C6 H6 N4 S**
CI COM
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, CHEMLIST, HODOC*, TOXCENTER
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

21 REFERENCES IN FILE CA (1967 TO DATE)
21 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:216978

REFERENCE 2: 134:208052

REFERENCE 3: 129:276241

REFERENCE 4: 127:109136

REFERENCE 5: 125:248292

REFERENCE 6: 124:176776

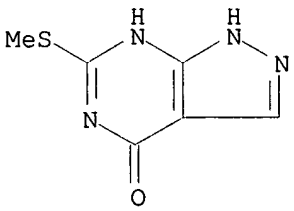
REFERENCE 7: 124:87669

REFERENCE 8: 122:239865

REFERENCE 9: 120:217524

REFERENCE 10: 118:7295

L148 ANSWER 38 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **5334-26-9** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-6-(methylthio)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol, 6-(methylthio)- (6CI, 8CI)
OTHER NAMES:
CN 6-(Methylthio)-1,7-dihydropyrazolo[3,4-d]pyrimidin-4-one
FS 3D CONCORD
MF **C6 H6 N4 O S**
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, TOXCENTER
(*File contains numerically searchable property data)



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6 REFERENCES IN FILE CA (1967 TO DATE)
6 REFERENCES IN FILE CAPLUS (1967 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 134:17496

REFERENCE 2: 103:37693

REFERENCE 3: 95:180745

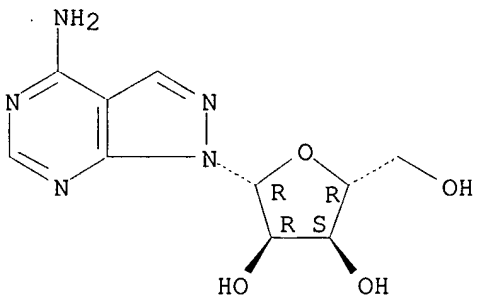
REFERENCE 4: 86:150384

REFERENCE 5: 79:78743

REFERENCE 6: 72:31827

L148 ANSWER 39 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **3258-05-7** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-amino-1-.beta.-D-ribofuranosyl- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 4-Amino-1-(.beta.-d-ribofuranosyl)pyrazolo-[3,4-d]pyrimidine
CN 6-Azatubercidin
CN 7-Deaza-8-azaadenosine
FS STEREOSEARCH
DR 21247-86-9
MF C10 H13 N5 O4
CI COM
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CHEMINFORMRX, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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37 REFERENCES IN FILE CAPLUS (1967 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:63677

REFERENCE 2: 131:223117

REFERENCE 3: 126:16189

REFERENCE 4: 123:52110

REFERENCE 5: 119:91079

REFERENCE 6: 107:112526

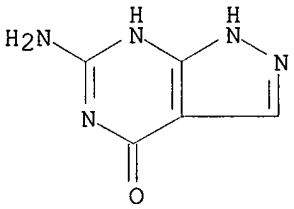
REFERENCE 7: 107:19783

REFERENCE 8: 106:172780

REFERENCE 9: 106:46285

REFERENCE 10: 105:54102

L148 ANSWER 40 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **2537-04-4** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1,5-dihydro- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol, 6-amino- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 4-Hydroxy-6-aminopyrazolo[3,4-d]pyrimidine
CN 8-Aza-7-deazaguanine
CN HAPP
FS 3D CONCORD
MF C5 H5 N5 O
CI COM
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, PHAR, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



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18 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
18 REFERENCES IN FILE CAPLUS (1967 TO DATE)
11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:305109

REFERENCE 2: 135:15068

REFERENCE 3: 134:26053

REFERENCE 4: 131:296189

REFERENCE 5: 131:282379

REFERENCE 6: 130:163642

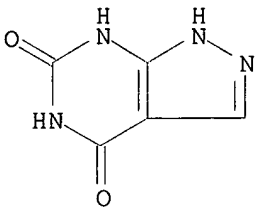
REFERENCE 7: 129:185075

REFERENCE 8: 128:317694

REFERENCE 9: 118:7344

REFERENCE 10: 106:207230

L148 ANSWER 41 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **2465-59-0** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-4,6(5H,7H)-dione (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 4H-Pyrazolo[3,4-d]pyrimidine-4,6(5H)-dione, 1,7-dihydro- (6CI)
OTHER NAMES:
CN 1H,3H,9H-Alloxanthine
CN 1H-Pyrazolo[3,4-d]pyrimidin-4,6-diol
CN 4,6-Dihydroxypyrazolo[3,4-d]pyrimidine
CN Alloxanthine
CN BW 55-5
CN Oxipurinol
CN Oxoallopurinol
CN Oxypurinol
FS 3D CONCORD
DR 16220-06-7, 22767-93-7, 4318-51-8
MF C5 H4 N4 O2
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DRUGNL, DRUGU, DRUGUPDATES, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, PHAR, PROMT, SPECINFO, TOXCENTER, USAN, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

361 REFERENCES IN FILE CA (1967 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
361 REFERENCES IN FILE CAPLUS (1967 TO DATE)
10 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:15591

REFERENCE 2: 136:172182

REFERENCE 3: 136:163266

REFERENCE 4: 136:79508

REFERENCE 5: 136:107

REFERENCE 6: 135:251362

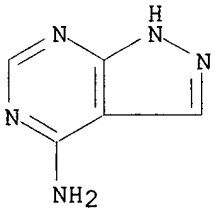
REFERENCE 7: 135:205240

REFERENCE 8: 135:148504

REFERENCE 9: 135:73328

REFERENCE 10: 135:15732

L148 ANSWER 42 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **2380-63-4** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-amino- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 4-Amino-1H-pyrazolo[3,4-d]pyrimidine
CN 4-Aminopyrazolo[3,4-d]pyrimidine
CN 8-Aza-7-deazaadenine
FS 3D CONCORD
MF C5 H5 N5
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, MEDLINE, NIOSHTIC, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



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3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
193 REFERENCES IN FILE CAPLUS (1967 TO DATE)
49 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:396964

REFERENCE 2: 136:378311

REFERENCE 3: 136:377390

REFERENCE 4: 136:305109

REFERENCE 5: 135:264486

REFERENCE 6: 135:180762

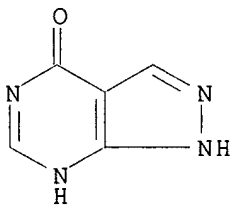
REFERENCE 7: 135:101932

REFERENCE 8: 135:67903

REFERENCE 9: 135:15068

REFERENCE 10: 134:348925

L148 ANSWER 43 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **315-30-0** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro- (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol
CN 4-Hydroxy-1H-pyrazolo[3,4-d]pyrimidine
CN 4-Hydroxypyrazolo[3,4-d]pyrimidine
CN Allopur
CN Allopurinol
CN Allopurinol(I)
CN Atisuril
CN Bloxanth
CN BW 56-158
CN Epidropal
CN Foligan
CN Gichtex
CN Gotax
CN HPP
CN Milurit
CN Uricemil
CN Uriprim
CN Urosin
CN Zyloprim
CN Zyloric
FS 3D CONCORD
DR 22767-92-6, 39464-14-7, 184856-42-6
MF C5 H4 N4 O
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGPAT, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PHARMASEARCH, PROMT, RTECS*, SPECINFO, TOXCENTER, USAN, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1862 REFERENCES IN FILE CA (1967 TO DATE)
29 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1866 REFERENCES IN FILE CAPLUS (1967 TO DATE)
9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:24099

REFERENCE 2: 137:15717

REFERENCE 3: 137:15591

REFERENCE 4: 137:15456

REFERENCE 5: 137:3174

REFERENCE 6: 136:398181

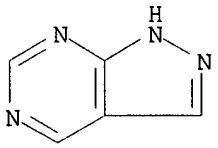
REFERENCE 7: 136:397931

REFERENCE 8: 136:395267

REFERENCE 9: 136:395180

REFERENCE 10: 136:390902

L148 ANSWER 44 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **271-80-7** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine (6CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1H-Pyrazolyl(3,4-d)pyrimidine
CN 5H-Pyrazolo[3,4-d]pyrimidine
FS 3D CONCORD
DR 35760-86-2
MF C5 H4 N4
CI COM, RPS
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, MEDLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

45 REFERENCES IN FILE CA (1967 TO DATE)
27 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
45 REFERENCES IN FILE CAPLUS (1967 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:318825

REFERENCE 2: 136:179591

REFERENCE 3: 135:237547

REFERENCE 4: 135:15068

REFERENCE 5: 134:218320

REFERENCE 6: 133:129894

REFERENCE 7: 132:146163

REFERENCE 8: 131:296189

REFERENCE 9: 130:206202

REFERENCE 10: 130:61060

=> d bib abs hitrn tot

L156 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:659532 HCAPLUS
DN 131:296189
TI **Oligonucleotides** containing pyrazolo[3,4-d]pyrimidines for hybridization and mismatch discrimination
IN **Meyer, Rich B., Jr.**; Afonina, Irina A.; Kutyavin, Igor V.
PA Epoch Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9951775	A1	19991014	WO 1999-US7492	19990405	<--
	W: AU, CA, JP					
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
	US 6127121	A	20001003	US 1998-54830	19980403	
	CA 2327547	AA	19991014	CA 1999-2327547	19990405	<--
	AU 9934724	A1	19991025	AU 1999-34724	19990405	<--
	EP 1068358	A1	20010117	EP 1999-916394	19990405	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
	JP 2002510507	T2	20020409	JP 2000-542486	19990405	<--
PRAI	US 1998-54830	A	19980403	<--		
	WO 1999-US7492	W	19990405			

AB **Oligonucleotides** in which one or more purine residues are substituted by pyrazolo[3,4-d]pyrimidines exhibit improved hybridization properties. **Oligonucleotides** contg. pyrazolo[3,4-d]pyrimidine base analogs have higher melting temps. than unsubstituted **oligonucleotides** of identical sequence. Thus, in assays involving hybridization of an **oligonucleotide** probe to a target **polynucleotide** sequence, higher signals are obtained. In addn., mismatch discrimination is enhanced when pyrazolo[3,4-d]pyrimidine-contg. **oligonucleotides** are used as hybridization probes, making them useful as probes and primers for hybridization, amplification and sequencing procedures, particularly those in which single- or multiple-**nucleotide** mismatch discrimination is required.
IT **271-80-7D**, 1H-Pyrazolo[3,4-d]pyrimidine, derivs. **315-30-0** **2380-63-4**, 1H-Pyrazolo[3,4-d]pyrimidin-4-amine **2537-04-4**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(**oligonucleotides** contg. pyrazolo[3,4-d]pyrimidines for hybridization and mismatch discrimination)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L156 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:659404 HCAPLUS
DN 131:282379
TI Hybridization and mismatch discrimination using **oligonucleotides** conjugated to minor groove binders
IN Hedgpeth, Joel; Afonina, Irina A.; Kutyavin, Igor V.; Lukhtanov, Eugeny A.; Belousov, Evgeniy S.; **Meyer, Rich B., Jr.**
PA Epoch Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9951621	A2	19991014	WO 1999-US7487	19990405 <--
	WO 9951621	A3	20011108		
	W: AU, CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6312894	B1	20011106	US 1998-54832	19980403 <--
	CA 2329135	AA	19991014	CA 1999-2329135	19990405 <--
	AU 9934721	A1	19991025	AU 1999-34721	19990405 <--
	EP 1144429	A2	20011017	EP 1999-916391	19990405 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1998-54832	A	19980403 <--		
	US 1995-415370	A2	19950403 <--		
	WO 1999-US7487	W	19990405		

AB Conjugates between a minor groove binding mol., such as the trimer of 1,2-dihydro-(3 H)-pyrrolo[3,2-e]indole-7-carboxylate (CDPI3), and an **oligonucleotide** form unusually stable hybrids with complementary target sequences, in which the tethered CDPI3 group resides in the minor groove of the duplex. These conjugates can be used as probes and primers. Due to their unusually high binding affinity, conjugates as short as 8-mers can be used as amplification primers with high specificity and efficiency. Minor groove binder (MGB) conjugation also increases the discriminatory power of short **oligonucleotides**, providing enhanced detection of **nucleotide** sequence mismatches by short **oligonucleotides**. The MGB-conjugated probes and primers described herein facilitate various analytic and diagnostic procedures, such as amplification reactions, PCR, detection of single-**nucleotide** polymorphisms, gene hunting, differential display, **fluorescence** energy transfer, hydrolyzable probe assays and others; by allowing the use of shorter **oligonucleotides**, which have higher specificity and better discriminatory power.
IT **2380-63-4**, 4-Amino-1H-pyrazolo[3,4-d]pyrimidine **2465-59-0** **2537-04-4**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(**oligonucleotides** conjugates contg.; hybridization and mismatch discrimination using **oligonucleotides** conjugated to minor groove binders)

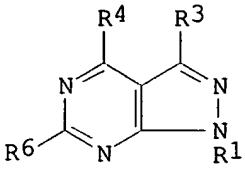
L156 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2002 ACS
AN 1992:16348 HCAPLUS
DN 116:16348
TI A novel biotinylated adenylate analog derived from pyrazolo[3,4-d]pyrimidine for **labeling** DNA probes
AU **Petrie, Charles R.**; Adams, A. David; Stamm, Michael; Van Ness,

Jeffery; Watanabe, Susan M.; **Meyer, Rich B., Jr.**
CS MicroProbe Corp., Bothell, WA, 98021, USA
SO Bioconjugate Chem. (1991), 2(6), 441-6
CODEN: BCCHES; ISSN: 1043-1802
DT Journal
LA English
AB A novel dATP analog 3-[5-[(N-biotinyl-6-aminocaproyl)amino]pentyl]-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1H-pyrazolo[3,4-d]pyrimidin-4-amine 5'-triphosphate, which is modified at the 3-position with a flexible linker arm bearing a terminal biotin moiety, was synthesized. This **nucleotide** is readily incorporated into DNA probes by nick translation. These probes hybridize to complementary targets as well as probes **labeled** with bio-dUTP, as judged by slot blot. When incorporated into **oligonucleotides**, they do not cause the loss of hybridization efficiency that an N-6-substituted adenine **nucleotide** does when incorporated into the same sites in the **oligonucleotide**.
IT **129357-76-2P**
RL: PREP (Preparation)
(prepn. and deprotection and biotinylation of)
IT **129357-70-6P 129357-75-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and phosphorylation of)
IT **137823-48-4P**
RL: PREP (Preparation)
(prepn. of)
IT **137823-47-3P**
RL: PREP (Preparation)
(prepn. of, for **labeling** of DNA probes)

L156 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2002 ACS
AN 1990:532717 HCAPLUS
DN 113:132717
TI Preparation of pyrazolo[3,4-d]pyrimidine derivatives as intermediates for diagnostic **oligonucleotides**
IN **Petrie, Charles R.; Meyer, Rich B.**
PA Microprobe Corp., USA
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 8

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	WO 9003370	A1	19900405		WO 1989-US4184	19890926	<--
	W: JP						
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE						
	CA 1338379	A1	19960611		CA 1989-613651	19890927	<--
	US 5824796	A	19981020		US 1994-334490	19941104	<--
PRAI	US 1988-250474	A	19880928	<--			
	US 1989-353857	B1	19890518	<--			
	US 1993-49807	B1	19930420	<--			

OS MARPAT 113:132717
GI



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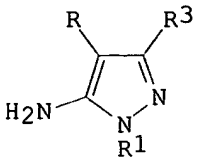

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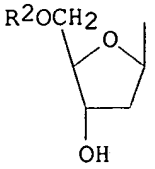
Q=



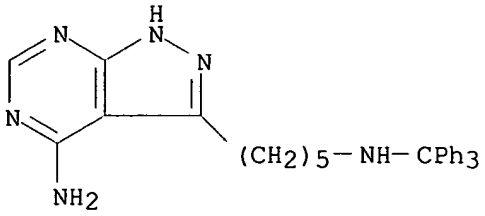
AB The title compds. [I; R1 = H, sugar moiety optionally substituted at its 3' or 5' position with mono-, di-, or triphosphate or a reactive **group** suitable for **nucleotide** bond formation; provided that when R3 = H, R1 .noteq. H; R3 = H, W(X)nA; W, X = chem. linker arm; A = intercalator, electrophilic **crosslinker**, **reporter group**; R4, R6 = H, OH, SH, alkylthio, NH2, NH(CH2)tNH2; n = 0,1; t = 0-12] were prepd. by (1) reaction of 5-aminopyrazole-4-carbonitriles (II; R = cyano; R1, R3 = as above) with a dialkoxymethyl carboxylate followed by reaction with NH3 to give I (R4 = NH2), (2) reaction of II (R = CONH2; R1, R3 = as above) with a dialkoxymethyl carboxylate to give I (R4 = OH), or (3) reaction of II (R = cyano, CONH2; R1, R3 = as above) with an alkyl xanthate salt followed by an alkyl halide and oxidn. An **oligonucleotide** sequence contg. .gtoreq.1 of **labeled** I (R1 = sugar moiety as described above), particularly **labeled** with biotin, is used as DNA hybridization probe and as a kit for identifying target DNA sequence comprising the above **labeled** **oligonucleotide** complementary to the target DNA, a denaturation reagent, and a hybridization reaction mixt. (no data). Thus, 5-amino-1-(2-deoxy-3,5-di-O-toluoyl-.beta.-D-erythropentofuranosyl)-3-[(5-tritylamino)pentyl]pyrazole-4-carbonitrile was heated 5 h at 80-90.degree. with AcOCH2(OEt)2 and the intermediate syrup was treated 2 days at room temp. with methanolic NH3 to give 77% I [R1 = Q, R2 = R6 = H, R3 = (CH2)5NHCPh3, R4 = NH2]. This was phosphorylated by reaction with POCl3 in (MeO)3PO followed by hydrolysis with 0.1 M NH4HCO3 to give I [R1 = Q, R2 = (HO)2P(O), R3 = (CH2)5NHCPh3, R4 = NH2, R6 = H] which was hydrogenolyzed over Pd(OH)2/C in cyclohexadiene and then acylated with N-hydroxysuccinimidyl 6-biotinamidocaproate in DMF contg. Et3N to give I [R1 = Q, R2 = (HO)2P(O), R3 = 5-[(6-biotinamido)hexamido]pentyl, R4 = NH2, R6 = H].

IT **129357-75-1P 129357-76-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, in prepn. of biotin-**labeled** deoxyribofuranosylpyrazolopyrimidine **nucleotide**)

IT **129357-70-6P 129357-71-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as intermediate for **oligonucleotide** hybridization probes)

=> d ide can tot

L158 ANSWER 1 OF 8 REGISTRY COPYRIGHT 2002 ACS
RN **137823-48-4** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-pentanamine, 4-amino-N-(triphenylmethyl)- (9CI) (CA INDEX NAME)
MF C29 H30 N6
SR CA
LC STN Files: CA, CAPLUS



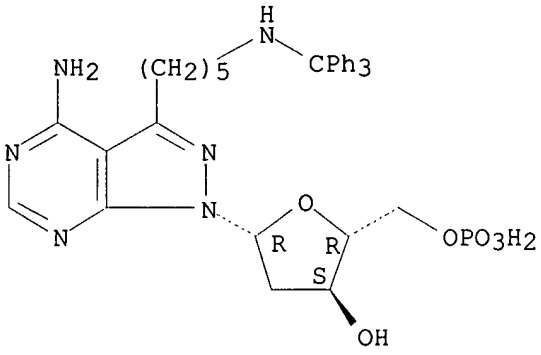
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 116:16348

L158 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2002 ACS
RN **129357-76-2** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-pentanamine, 4-amino-1-(2-deoxy-5-O-phosphono-.beta.-D-erythro-pentofuranosyl)-N-(triphenylmethyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C34 H39 N6 O6 P
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



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5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:330802

REFERENCE 2: 126:153646

REFERENCE 3: 119:221156

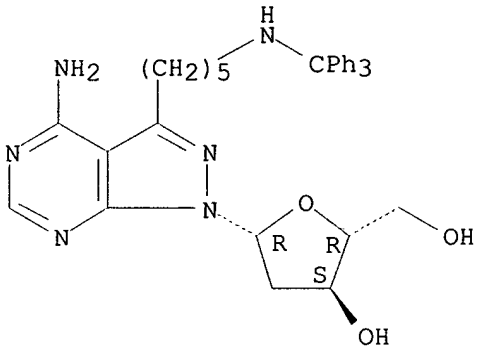
REFERENCE 4: 116:16348

REFERENCE 5: 113:132717

L158 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2002 ACS
RN **129357-75-1** REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-3-pentanamine, 4-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-N-(triphenylmethyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C34 H38 N6 O3
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



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5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:330802

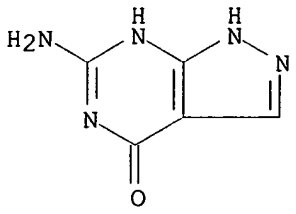
REFERENCE 2: 126:153646

REFERENCE 3: 119:221156

REFERENCE 4: 116:16348

REFERENCE 5: 113:132717

L158 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2002 ACS
RN **2537-04-4** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1,5-dihydro- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol, 6-amino- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 4-Hydroxy-6-aminopyrazolo[3,4-d]pyrimidine
CN 8-Aza-7-deazaguanine
CN HAPP
FS 3D CONCORD
MF C5 H5 N5 O
CI COM
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, PHAR, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

18 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
18 REFERENCES IN FILE CAPLUS (1967 TO DATE)
11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:305109

REFERENCE 2: 135:15068

REFERENCE 3: 134:26053

REFERENCE 4: 131:296189

REFERENCE 5: 131:282379

REFERENCE 6: 130:163642

REFERENCE 7: 129:185075

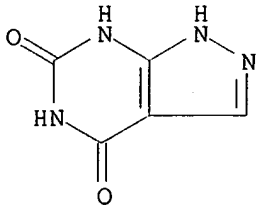
REFERENCE 8: 128:317694

REFERENCE 9: 118:7344

REFERENCE 10: 106:207230

L158 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2002 ACS
RN **2465-59-0** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-4,6(5H,7H)-dione (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 4H-Pyrazolo[3,4-d]pyrimidine-4,6(5H)-dione, 1,7-dihydro- (6CI)
OTHER NAMES:
CN 1H,3H,9H-Alloxanthine
CN 1H-Pyrazolo[3,4-d]pyrimidin-4,6-diol
CN 4,6-Dihydroxypyrazolo[3,4-d]pyrimidine
CN Alloxanthine
CN BW 55-5
CN Oxipurinol
CN Oxoallopurinol
CN Oxypurinol
FS 3D CONCORD
DR 16220-06-7, 22767-93-7, 4318-51-8
MF C5 H4 N4 O2
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DRUGNL, DRUGU, DRUGUPDATES, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, PHAR, PROMT, SPECINFO, TOXCENTER, USAN, USPATFULL, VETU

(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)



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361 REFERENCES IN FILE CAPLUS (1967 TO DATE)
10 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:15591

REFERENCE 2: 136:172182

REFERENCE 3: 136:163266

REFERENCE 4: 136:79508

REFERENCE 5: 136:107

REFERENCE 6: 135:251362

REFERENCE 7: 135:205240

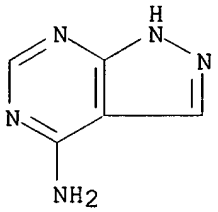
REFERENCE 8: 135:148504

REFERENCE 9: 135:73328

REFERENCE 10: 135:15732

L158 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2002 ACS
RN **2380-63-4** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-amino- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 4-Amino-1H-pyrazolo[3,4-d]pyrimidine
CN 4-Aminopyrazolo[3,4-d]pyrimidine
CN 8-Aza-7-deazaadenine
FS 3D CONCORD
MF C5 H5 N5
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, MEDLINE, NIOSHTIC, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



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49 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:396964

REFERENCE 2: 136:378311

REFERENCE 3: 136:377390

REFERENCE 4: 136:305109

REFERENCE 5: 135:264486

REFERENCE 6: 135:180762

REFERENCE 7: 135:101932

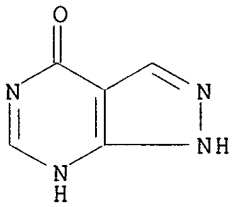
REFERENCE 8: 135:67903

REFERENCE 9: 135:15068

REFERENCE 10: 134:348925

L158 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2002 ACS
RN **315-30-0** REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro- (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol
CN 4-Hydroxy-1H-pyrazolo[3,4-d]pyrimidine
CN 4-Hydroxypyrazolo[3,4-d]pyrimidine
CN Allopur
CN Allopurinol
CN Allopurinol(I)
CN Atisuril
CN Bloxanth
CN BW 56-158
CN Epidropal
CN Foligan
CN Gichtex
CN Gotax
CN HPP
CN Milurit
CN Uricemil
CN Uriprim

CN Urosin
CN Zyloprim
CN Zyloric
FS 3D CONCORD
DR 22767-92-6, 39464-14-7, 184856-42-6
MF C5 H4 N4 O
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGPAT, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PHARMASEARCH, PROMT, RTECS*, SPECINFO, TOXCENTER, USAN, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)



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1866 REFERENCES IN FILE CAPLUS (1967 TO DATE)
9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:24099

REFERENCE 2: 137:15717

REFERENCE 3: 137:15591

REFERENCE 4: 137:15456

REFERENCE 5: 137:3174

REFERENCE 6: 136:398181

REFERENCE 7: 136:397931

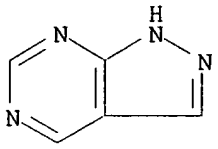
REFERENCE 8: 136:395267

REFERENCE 9: 136:395180

REFERENCE 10: 136:390902

L158 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2002 ACS
RN **271-80-7** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine (6CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1H-Pyrazolyl(3,4-d)pyrimidine
CN 5H-Pyrazolo[3,4-d]pyrimidine
FS 3D CONCORD
DR 35760-86-2

MF C5 H4 N4
CI COM, RPS
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, MEDLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:318825

REFERENCE 2: 136:179591

REFERENCE 3: 135:237547

REFERENCE 4: 135:15068

REFERENCE 5: 134:218320

REFERENCE 6: 133:129894

REFERENCE 7: 132:146163

REFERENCE 8: 131:296189

REFERENCE 9: 130:206202

REFERENCE 10: 130:61060

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FILE LAST UPDATED: 8 Jul 2002 (20020708/ED)

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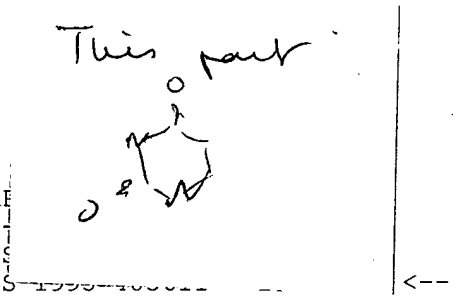
=> d all tot l184

L184 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:754456 HCAPLUS
DN 133:306344
TI Targeted mutagenesis in living cells using modified **oligonucleotides**
IN **Meyer, Rich B., Jr.**; Gamper, Howard B.; Kutyavin, Igor V.; Gall, Alexander A.
PA Epoch Pharmaceuticals, Inc., USA
SO U.S., 19 pp., Cont.-in-part of U.S. 5,849,482.
CODEN: USXXAM
DT Patent
LA English
IC ICM C12Q001-68
ICS C07H021-04
NCL 435375000
CC 3-2 (Biochemical **Genetics**)
Section cross-reference(s): 10, 11, 12,



FAN.CNT 8

	PATENT NO.	KIND	DATE	AP
PI	US 6136601	A	20001024	US
	US 5849482	A	19981215	US [illegible] <--
PRAI	US 1991-748138	B1	19910821	
	US 1994-178733	B2	19940107	
	US 1995-485611	A2	19950607	
	US 1988-250474	B2	19880928	<--
	US 1989-353857	B1	19890518	
	US 1993-11482	B2	19930126	
	US 1993-49807	B1	19930420	
	US 1994-226949	A2	19940627	
	US 1994-334490	A	19941104	

AB A method for introducing a site-specific mutation into a target **polynucleotide** sequence is presented. The method involves the use of an **oligonucleotide** capable of binding to the target sequence, either by triplex formation (mediated by Hoogsteen, reverse Hoogsteen or equiv. base pairing) or by Watson/Crick base pairing (in the presence of a recombinase enzyme). The **oligonucleotide** of the invention is modified by the covalent attachment of one or more electrophilic groups. When a modified **oligonucleotide** is bound to its target sequence, the electrophilic group is able to interact with a nearby **nucleotide** in the target sequence, causing a modification to the **nucleotide** that results in a change in **nucleotide** sequence. Compns. used in the practice of the method are also disclosed.
ST target mutagenesis living cell modification **oligonucleotide**
IT Animal cell line
(COS; targeted mutagenesis in living cells using modified **oligonucleotides**)
IT Quaternary structure
(DNA triplex; targeted mutagenesis in living cells using modified **oligonucleotides**)
IT Enzymes, biological studies
RL: BSU (Biological study, unclassified); CAT (Catalyst use); BIOL (Biological study); USES (Uses)

(DNA-recombining, **oligonucleotide** with; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Escherichia coli
(MBM7070, transformation by electroporation; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Chromosome
(animal; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT **Crosslinking**
(between **oligonucleotide** and plasmid; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Pathogen
(genome of, mutagenesis of target sequence; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Plasmids
(pSP189; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Chromosome
(plant, target sequence in; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Mutagenesis
(site-directed; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Gene, animal
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(supF; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Animal tissue culture
Electroporation
Transformation, **genetic**
(targeted mutagenesis in living cells using modified **oligonucleotides**)

IT **Oligonucleotides**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Genome
(viral, of pathogen; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Mutagens
(with electrophilic group or alkylating agent; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT 55-86-7, Nitrogen mustard
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(bifunctional, alkylating group; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT **171258-27-8D, oligonucleotides** contg. 237059-49-3D, **oligonucleotides** contg.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(targeted mutagenesis in living cells using modified **oligonucleotides**)

IT 6872-73-7, Coralyne
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(triplex stabilizer; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT 302479-26-1, 1: PN: US6136601 SEQID: 5 unclaimed DNA 302479-27-2, 2: PN: US6136601 SEQID: 6 unclaimed DNA 302479-28-3, 3: PN: US6136601 SEQID: 7 unclaimed DNA 302479-29-4, 4: PN: US6136601 SEQID: 8 unclaimed DNA 302479-30-7, 5: PN: US6136601 SEQID: 9 unclaimed DNA 302479-31-8, 6: PN: US6136601 SEQID: 1 unclaimed DNA 302479-32-9, 8: PN: US6136601 SEQID: 3 unclaimed DNA 302479-33-0, 9: PN: US6136601 SEQID: 4 unclaimed DNA

RL: PRP (Properties)
(unclaimed **nucleotide** sequence; targeted mutagenesis in living cells using modified **oligonucleotides**)
IT 302479-34-1
RL: PRP (Properties)
(unclaimed sequence; targeted mutagenesis in living cells using modified **oligonucleotides**)
RE.CNT 133 THERE ARE 133 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L184 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:505631 HCAPLUS
DN 131:154471
TI Targeted mutagenesis in living cells using modified **oligonucleotides**
IN **Meyer, Rich B., Jr.**; Gamper, Howard B.; Kutyavin, Igor V.; Gall, Alexander A.
PA Epoch Pharmaceuticals, Inc., USA
SO U.S., 20 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM C12N015-00
ICS C07K021-04
NCL 435172100
CC 3-2 (Biochemical **Genetics**)
Section cross-reference(s): 13
FAN.CNT 8

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	US 5935830	A	19990810		US 1997-827116	19970326	
	US 5849482	A	19981215		US 1995-485611	19950607	<--
	CA 2223584	AA	19961219		CA 1996-2223584	19960607	
PRAI	US 1995-485611	A2	19950607				
	US 1988-250474	B2	19880928	<--			
	US 1989-353857	B1	19890518				
	US 1991-748138	B1	19910821				
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	US 1994-334490	A	19941104				

AB A method for introducing a site-specific mutation into a target **polynucleotide** sequence is presented. The method involves the use of an **oligonucleotide** capable of binding to the target sequence, either by triplex formation (mediated by Hoogsteen, reverse Hoogsteen or equiv. base pairing) or by Watson/Crick base pairing (in the presence of a recombinase enzyme). The **oligonucleotide** of the invention is modified by the covalent attachment of one or more electrophilic groups. When a modified **oligonucleotide** is bound to its target sequence, the electrophilic group is able to interact with a nearby

nucleotide in the target sequence, causing a modification to the **nucleotide** that results in a change in **nucleotide** sequence. Compns. used in the practice of the method are disclosed. Also disclosed are arm-leaving group structure having the formula -A-L such as (CH2)qY(CH2)mL, (CH2)qNHCO(CH2)m(X)n'N(R1)(CH2)pL, or (CH2)q'O(CH2)q''NHCO(CH2)m(X)n'N(R1)(CH2)pL (q=0-8, q'=1-7; Y=NH2, OH, SH, COOH, C.ident.CH; X= (Cl, Br, lower alkyl, lower alkoxy-substituted) Ph; n'=0, 1; p= 1-6; R1=H, lower alkyl, or (CH2)pL; L=Cl, Br, I, SO2R2, S+R3; R3,R4=C1-6 alkyl, aryl, heteroaryl, or R3 and R4 form a C1-6-alkylene bridge).

ST target mutagenesis living cell modification **oligonucleotide**

IT Quaternary structure
(DNA triplex; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Enzymes, biological studies
RL: BSU (Biological study, unclassified); CAT (Catalyst use); BIOL (Biological study); USES (Uses)
(DNA-recombining, **oligonucleotide** with; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Plasmids
(pSP189; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Chromosome
(plant, animal; target sequence; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Mutagenesis
(site-directed; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Gene, animal
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(supF; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Animal tissue culture
(targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Genome
(viral, of pathogen; target sequence; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT 55-86-7, Nitrogen mustard
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(bifunctional, alkylating group; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT **171258-27-8D**, **oligonucleotides** contg. 237059-49-3D, **oligonucleotides** contg.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(targeted mutagenesis in living cells using modified **oligonucleotides**)

IT 6872-73-7, Coralyne
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(triplex stabilizer; targeted mutagenesis in living cells using modified **oligonucleotides**)

RE.CNT 155 THERE ARE 155 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L184 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:148844 HCAPLUS
DN 126:153646
TI **Oligonucleotide** derivs. preparation for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy
IN **Meyer, Rich B., Jr.**; Gamper, Howard B.; Kutyavin, Igor V.; Gall, Alexander A.; **Petrie, Charles R.**; **Tabone, John C.**; **Hurst, Gerald D.**
PA Microprobe Corporation, USA
SO PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07H021-00
CC 3-1 (Biochemical **Genetics**)
Section cross-reference(s): 1, 33
FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9640711	A1	19961219	WO 1996-US9551	19960607
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TR, TT, UA, UG				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5849482	A	19981215	US 1995-485611	19950607 <--
	CA 2223584	AA	19961219	CA 1996-2223584	19960607
	AU 9661035	A1	19961230	AU 1996-61035	19960607
	AU 709924	B2	19990909		
	EP 842186	A1	19980520	EP 1996-918350	19960607
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 11509528	T2	19990824	JP 1996-501849	19960607
PRAI	US 1995-485611	A	19950607		
	US 1988-250474	B2	19880928 <--		
	US 1989-353857	B1	19890518		

US 1991-748138 B1 19910821
US 1993-11482 B2 19930126
US 1993-49807 B1 19930420
US 1994-178733 B2 19940107
US 1994-226949 A2 19940627
US 1994-334490 A 19941104
WO 1996-US9551 W 19960607

AB **Oligonucleotide** derivs. (ODNs) include a sequence that is complementary to a target sequence in single-stranded RNA, or single- or double-stranded DNA, and an alkylating function which after hybridization alkylates the target sequence. ODNs adapted for alkylating single-stranded RNA, such as mRNA, are complementary to the target sequence in the Watson Crick sense. ODNs adapted for alkylating double-stranded DNA have at least two alkylating functions and are complementary to the target sequence in the Hoogsteen or reverse Hoogsteen sense. With these ODNs both strands of the target sequence are alkylated. A third class of ODNs have at least approx. 26 **nucleotide** units in a continuous sequence which are complementary to the target sequence of double-stranded DNA, and the alkylating function is covalently attached to a **nucleotide** unit in the continuous sequence. Alkylation or **crosslinking** with this class of ODNs occurs in the presence of a recombinase enzyme.

ST **oligonucleotide** deriv alkylating **crosslinking** agent gene; mapping gene **oligonucleotide** deriv alkylating **crosslinking**; therapy gene **oligonucleotide** deriv alkylating **crosslinking**

IT Enzymes, uses
RL: CAT (Catalyst use); USES (Uses)
(DNA-recombining, in recombinase presence; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT **Oligonucleotides**
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); CAT (Catalyst use); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(derivs.; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT DNA
RL: ANT (Analyte); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(double-stranded; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT **Oligonucleotides**
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); CAT (Catalyst use); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(haloacylamidoalkyl derivs.; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT Alkylating agents, biological
Crosslinking agents
Gene therapy
Genetic mapping
(**oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT mRNA
RL: ANT (Analyte); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(**oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT Probes (**nucleic** acid)
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); CAT (Catalyst use); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT Gene
(regulation, inhibition; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT DNA
RNA
RL: ANT (Analyte); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(single-stranded; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT **123265-52-1D**, **oligonucleotide** derivs.
186696-57-1D, **oligonucleotide** derivs.
186696-58-2D, **oligonucleotide** derivs.
186696-59-3D, **oligonucleotide** derivs.
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); CAT (Catalyst use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 161601-18-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with iododeoxyuridine; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 5612-13-5P, 6-(Tritylamino)caproic acid
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with malononitrile or cyanoacetamide; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 161601-17-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with **oligonucleotide** salts; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 129357-70-6P 129357-73-9P 129357-74-0P 129357-75-1P 129357-76-2P 137823-46-2P 142685-25-4P **161601-19-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 129357-72-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**,

gene mapping, and gene therapy)

IT **134140-85-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and redn.; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT **134141-36-9P** 137823-47-3P **161601-20-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn.; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 76-83-5, Trityl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with aminocaproic acid; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 3601-89-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with carbonitrile deriv.; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 14396-90-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with iododeoxyuridine; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 72040-63-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with **nucleotide** deriv.; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 54-42-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with phthalimido-butyne or (trifluoroacetamidoethoxy)propyne; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 14036-06-7, Diethoxymethyl acetate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with pyrazole carbonitrile deriv.; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 407-25-0, Trifluoroacetic anhydride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with tetrafluorophenol; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 305-03-3DP, Chlorambucil, **oligonucleotide** derivs.
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); CAT (Catalyst use); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(reaction with tetrafluorophenyl trifluoroacetate; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 305-03-3, Chlorambucil
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with tetrafluorophenyl trifluoroacetate; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 769-39-1, 2,3,5,6-Tetrafluorophenol
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with trifluoroacetic acid; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)
IT 109-77-3, Malononitrile
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with tritylamino caproic acid; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)
IT 60-32-2, 6-Aminocaproic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(tritylation; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

L184 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2002 ACS
AN 1991:409259 HCAPLUS
DN 115:9259
TI Preparation of **crosslinking oligonucleotides** as **nucleic** acid hybridization probes
IN **Petrie, Charles R.; Meyer, Richard B.; Tabone, John C.; Hurst, Gerald D.**
PA Microprobe Corp., USA
SO PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07H021-00
ICS C12Q001-68; C12Q001-70; G01N033-53
CC 33-9 (Carbohydrates)
Section cross-reference(s): 9
FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9014353	A1	19901129	WO 1990-US2740	19900515	
	W: CA, JP					
	RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE					
	EP 472648	A1	19920304	EP 1990-908844	19900515	
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE					
	JP 04507402	T2	19921224	JP 1990-508242	19900515	
	US 5824796	A	19981020	US 1994-334490	19941104	<--
PRAI	US 1989-353857	A	19890518			
	US 1988-250474	B2	19880928	<--		
	WO 1990-US2740	W	19900515			
	US 1993-49807	B1	19930420			

OS MARPAT 115:9259
AB R1-B-(CH2)q-Yr-(CH2)m-A1 [R1 = H, sugar (analog) moiety optionally contg. Q1, Q2, Q3, P, etc.; Q1 = OH, OP(O)(OH)2, OP(O)(OH)OP(O)(OH)2; Q2 = O, S; Q3 = CH2R2, SR2, OR2, NR2R3; R2, R3 = H, alkyl; B = **nucleic** acid base or an analog thereof; Y = functional linking group; m, q = 0, 1-8 integer; r = 0, 1; A1 = leaving group], useful as **nucleic** acid hybridization probes and therefore useful for diagnosis of diseases, were prepd. Reaction of 5-iodo-2'-deoxyuridine in DMF with 4-phthalimido-1-butyne in the presence of (Ph3P)4Pd and Et3N at 60.degree. for 3 h gave 5-(4-phthalimido-1-butyn-1-yl)-2'-deoxyuridine, whose hydrogenation over Raney Ni gave 5-(4-phthalimidobutyl)-2'-deoxyuridine. 5-[3-(Trifluoroacetamido)propyl]-2'-deoxyuridine was prepd. similarly and converted according to known methods into 5'-O-(dimethoxytrityl)-2'-deoxyuridine-3'-(N,N-diisopropyl)phosphoramidite cyanoethyl ester, which was used in the automated synthesis of 3'-CT TCC U1TG TAG CTG-5' [I; U1 = 5-(3-aminopropyl)-2'-deoxyuridine residue]. This was reacted with N-(iodoactoxy)succinimide to give II [U1 = 5-(3-iodoacetamidopropyl)-2'-

uridine residue], whose **crosslinking** to a 30-mer **oligonucleotide** derived from human papillomavirus (HPV) was evaluated.

ST **crosslinking oligonucleotide** prepn; **nucleic** acid hybridization probe

IT **Nucleic** acid hybridization
(probes, **crosslinking oligonucleotides** for)

IT Diagnosis
(agents, **nucleic** acid hybridization probes in, **crosslinking oligonucleotides** as)

IT **Nucleotides**, polymers
RL: SPN (Synthetic preparation); PREP (Preparation)
(oligo-, **crosslinking**, prepn. of, as probes for **nucleic** acid hybridization)

IT 14396-90-8
RL: RCT (Reactant)
(alkylation by, of iododeoxyuridine)

IT 54-42-2, 5-Iodo-2'-deoxyuridine
RL: RCT (Reactant)
(alkynylation of)

IT **123265-52-1P 134140-85-5P 134141-36-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and hydrogenation of)

IT 134090-60-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with (iodoacetoxy)succinimide)

IT 134090-62-3P 134090-64-5P 134090-67-8P 134090-68-9P 134090-69-0P
134374-31-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as probe for **nucleic** acid hybridization)

IT 134090-61-2P 134140-87-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for automated synthesis of **oligonucleotides**)

IT 134090-63-4P 134374-27-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for **nucleic** acid hybridization probe)

IT 134140-86-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn., for automated synthesis of **oligonucleotides**)

IT **134158-63-7**
RL: RCT (Reactant)
(reaction of, with (iodoacetoxy)succinimide)

IT 39028-27-8, N-Hydroxysuccinimide iodoacetate 42014-52-8
RL: RCT (Reactant)
(reaction of, with deoxyuridine deriv.)

L184 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2002 ACS
AN 1991:409258 HCAPLUS
DN 115:9258
TI Preparation of single stranded labelled oligonucleotides and reactive monomers
IN Ruth, Jerry L.
PA Syngene, inc., USA
SO U.S., 23 pp. Cont.-in-part of U.S. Ser. No. 617,094, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM C07H019-073
ICS C07H019-10; C07H019-173; C07H019-20
NCL 536027000
CC 33-9 (Carbohydrates)
Section cross-reference(s): 6, 9
FAN.CNT 2

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	US 4948882	A	19900814		US 1987-46133	19870504	<--
	US 5541313	A	19960730		US 1994-336500	19941109	<--
	US 5668266	A	19970916		US 1995-439860	19950512	<--
	US 5817786	A	19981006		US 1997-814289	19970310	<--
PRAI	US 1983-468498		19830222	<--			
	US 1984-617094		19840222	<--			
	US 1987-46133		19870504	<--			
	US 1990-505032		19900427				
	US 1994-288337		19940810				
	US 1994-336500		19941109				
	US 1995-484028		19950607				

OS MARPAT 115:9258

GI For diagram(s), see printed CA Issue.

AB The title compds. [I; B = pyrimidine or purine residue; R = linker attached to a blocking group, a detectable label e.g., residue of fluorescein or luminol or its derivs., or a solid support; when R4 = blocking group, then R5 = reactive phosphorus-contg. group or H if the 5'-OH group of the 5'-terminal nucleotide of a growing oligonucleotide contains a reactive phosphorus-contg. group; when R5 = blocking group, then R4 = reactive phosphorus-contg. group or H if the 3'-OH group of the 3'-terminal nucleotide of a growing oligonucleotide contains a reactive phosphorus-contg. group], useful for detection or identification of DNA by hybridization, are prepd. 5-[3-(Trifluoroacetamido)propenyl]-2'-deoxyuridine (prepn. given) was 5'-tritylated with dimethoxytrityl chloride and then hydrogenated to give 5'-dimethoxytrityl-5-[3-(trifluoroacetamido)propyl]-2'-deoxyuridine, which was condensed with MeOPCl2 to give 5'-dimethoxytrityl-5-[3-(trifluoroacetamido)propyl]-2'-deoxyuridine 3'-[methyl phosphoromonochloridite]. This was then incorporated into a pentadecanucleotide [II; Um = 5-(3-aminopropyl)uracil residue]. II [Um = 5-[2-[(7-aminoheptyl)carbamoyl]vinyl]uracil residue] in an aq. Na borate or Na carbonate buffer contg. NaCl was reacted with fluorescein isothiocyanate at 4-25.degree. overnight to give II [Um = Q, Q1 = fluorescein residue]. Conjugation of the prepd. I with alk. phosphatase is also demonstrated.

ST nucleotide **reporter group** prepn; labeled nucleotide DNA hybridization probe

IT Nucleic acid hybridization
(probes for, **reporter group**-contg. oligodeoxyribonucleotides for)

IT Nucleotides, polymers
RL: SPN (Synthetic preparation); PREP (Preparation)
(oligo-, deoxyribo-, labeled, prepn. of, as DNA hybridization probes)

IT 407-25-0
RL: RCT (Reactant)
(acylation by, of adenosine deriv.)

IT 93-97-0, Benzoic anhydride
RL: RCT (Reactant)
(acylation by, of cytidine deriv.)

IT 96102-29-3 96102-32-8
RL: RCT (Reactant)
(acylation of)

IT 383-65-3, N-Allyltrifluoroacetamide
RL: RCT (Reactant)
(alkenylation by, of uridine deriv.)

IT 65505-76-2 65523-09-3
RL: RCT (Reactant)
(alkenylation of)

IT 70-34-8, 1-Fluoro-2,4-dinitrobenzene
RL: RCT (Reactant)
(condensation of, with [(aminohexyl)amino]adenine-contg. oligonucleotide)

IT 74855-51-9 78635-95-7 78635-96-8 78635-97-9 96102-35-1
134128-78-2
RL: RCT (Reactant)
(condensation of, with nucleoside phosphites in prepn. of oligonucleotides)
IT 27072-45-3, Fluorescein isothiocyanate 66612-29-1
RL: RCT (Reactant)
(condensation of, with oligonucleotide)
IT 3279-26-3, Methyl phosphorodichloridite 89992-70-1 134128-79-3
RL: RCT (Reactant)
(condensation of, with uridine deriv.)
IT 96102-36-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with fluorodinitrobenzene)
IT **96102-22-6P 96102-24-8P** 96102-25-9P 96102-26-0P
96102-28-2P 96102-31-7P 96102-34-0P 96102-35-1P 106857-10-7P
134128-80-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, in prepn. of oligonucleotides with **reporter groups**)
IT 96102-30-6P 96102-33-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and tritylation of)
IT 9001-78-9DP, conjugate with **reporter group**-contg. nucleotide
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 27072-45-3DP, conjugate with oligonucleotide 96118-77-3DP, fluoresceinaminocabonyl deriv. 134090-88-3P 134090-90-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as DNA hybridization probe)
IT 96118-77-3P 96476-83-4P 134090-70-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, in prepn. of labeled oligonucleotide DNA hybridization probes)
IT 40615-36-9
RL: RCT (Reactant)
(tritylation by, of nucleoside derivs.)

L184 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2002 ACS
AN 1987:631607 HCAPLUS
DN 107:231607
TI Base dynamics of nitroxide-labeled thymidine analogs incorporated into (dA-dT)n by DNA polymerase I from E. coli
AU Pauly, Gary T.; Thomas, Ingrid E.; Bobst, Albert M.
CS Dep. Chem., Univ. Cincinnati, Cincinnati, OH, 45221, USA
SO Biochemistry (**1987**), 26(23), 7304-10
CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English
CC 6-2 (General Biochemistry)
Section cross-reference(s): 7, 9
AB Nitroxide-labeled thymidine substrates (dL) for Escherichia coli DNA polymerase I (pol I) were used to synthesize spin-labeled alternating double-stranded copolymers with (dA-dT)n as a template. All dL substrates use an alkane or alkene tether substituted into the 5-position of the pyrimidine ring to link a 5- or 6-membered ring nitroxide to the pyrimidine base. The kinetics of dL incorporation show some tether dependence with respect to tether length and tether geometry. The ESR spectra of (dA-dT,dL)n duplexes directly formed by polymn. with pol I are compared with the ESR spectra of (dA)n(dT,dL)n duplexes, which are obtained after annealing of nitroxide-labeled single strands with complementary unlabeled single strands. The ESR spectra indicate that

nitroxide-labeled analogs with tethers short enough to let the nitroxide ring reside in the major groove are excellent **reporter groups** for monitoring hybridization. A small difference between the ESR line shapes of the alternating duplexes (dA-dT,dL) n and the homopolymer duplexes (dA)n(dT,dL)n contg. the same dL is detectable, suggesting the presence of subtle differences in the base dynamics between both systems. Computer simulation of the ESR spectra of the (dA-dT,dL)n duplexes was successful with the same motional model reported earlier. The thymidine motion arising from tilting and torsion of base pairs and base twisting in (dA-dT)n is similar to that in (dA)n(dT)n and is of the order of 4 ns.

ST thymidine nitroxide label polynucleotide base dynamics; DNA polymerase thymidine nitroxide label

IT Nucleic acid bases
RL: PRP (Properties)
(dynamics of, in polynucleotides, nitroxide-labeled thymidine analogs as probes of)

IT Conformation and Conformers
(of nucleic acid bases, in polynucleotides, dynamics of, nitroxide-labeled thymidine analogs as probes of)

IT 9012-90-2
RL: BIOL (Biological study)
(I, thymidine nitroxide analog-contg. DNAs prepn. with, for base dynamics study)

IT **111085-67-7 111186-71-1**
RL: BIOL (Biological study)
(base dynamics of nitroxide-labeled thymidine analog in)

IT 111085-69-9P 111112-20-0P 111112-32-4P 111186-73-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(double-stranded, prepn. and base dynamics of nitroxide-labeled thymidine analogs in)

IT **50-89-5D**, Thymidine, nitroxide-labeled derivs. 111060-17-4 111060-18-5 111085-66-6 111138-82-0
RL: RCT (Reactant)
(polymn. of, with DNA polymerase I, for use as probe of base dynamics in polynucleotides)

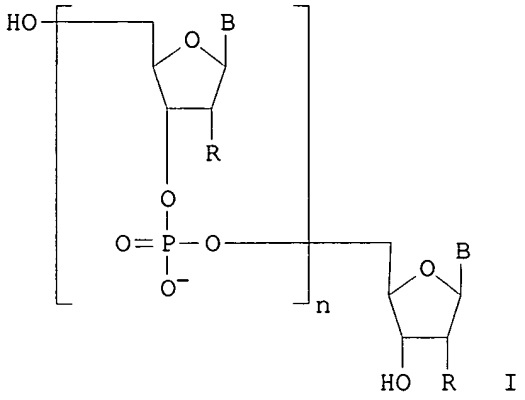
IT **111085-68-8P 111186-72-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and base dynamics of nitroxide-labeled thymidine analogs in)

L184 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2002 ACS
AN 1985:204247 HCAPLUS
DN 102:204247
TI Defined sequence single strand oligonucleotides incorporating **reporter groups**, and nucleosides useful in such synthesis
IN Ruth, Jerry L.
PA Molecular Biosystems, Inc., USA
SO PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DT Patent
LA English
IC C07H017-00; C07H019-06; C07H015-12; C12Q001-68
CC 33-10 (Carbohydrates)
Section cross-reference(s): 6, 9
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8403285	A1	19840830	WO 1984-US279	19840222 <--
	W: AU, DK, JP, NO, US				
	RW: CH, DE, FR, GB, NL, SE				
	AU 8428139	A1	19840910	AU 1984-28139	19840222 <--
	AU 596068	B2	19900426		

	JP 60500717	T2	19850403	JP 1984-501526	19840222 <--
	JP 03059914	B4	19910912		
	EP 135587	A1	19850403	EP 1984-901462	19840222 <--
	EP 135587	B1	19900502		
	R: CH, DE, FR, GB, LI, NL, SE				
	CA 1231650	A1	19880119	CA 1984-460489	19840807 <--
	NO 8404196	A	19841019	NO 1984-4196	19841019 <--
	NO 170890	B	19920914		
	NO 170890	C	19921223		
	DK 8405021	A	19841219	DK 1984-5021	19841019 <--
	JP 03086897	A2	19910411	JP 1990-197582	19900723 <--
	JP 2542453	B2	19961009		
PRAI	US 1983-468498		19830222 <--		
	WO 1983-US254		19830222 <--		
	WO 1984-US279		19840222 <--		

GI



AB Defined sequence oligonucleotides I (n = 1-199; R = H, OH; B is any of the naturally occurring purine or pyrimidine base; the nucleotide units having naturally occurring bases are independently intermixed with one or more nucleotide units having modified bases Bm contg. the **reporter groups**) and the nucleosides useful in their synthesis were prepd. The oligonucleotides with the **reporter groups** are useful in the identification, localization and detection of complementary nucleic acid sequences of interest in cellular or cell-free systems (no data). The oligonucleotides were prepd. by coupling reaction of the appropriate units on a solid support. Thus, 5-(chloromercuri)-2'-deoxyuridine was treated with N-(7-trifluoroacetylaminoheptyl)acrylamide in MeOH in the presence of Li tetrachloropalladate to give 5-[N-trifluoroacetylaminoheptyl)-1-acrylamido]-2'-deoxyuridine. The latter was used in the synthesis of a pentadecadeoxynucleotide in which 5 nucleotides had 5-[N-(7-aminoheptyl)-1-acrylamido]uracil as the modified base. The pentadecadeoxynucleotide was treated with fluorescein isothiocyanate to give the fluoresceinated oligodeoxynucleotide.

ST oligonucleotide **reporter group**; nucleotide oligo **reporter group**; fluoresceinated deoxyoligonucleotide; nucleoside modified purine pyrimidine

IT Nucleosides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for synthesis of oligonucleotides incorporating **reporter groups**)

IT Nucleotides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(oligo-, **reporter group**-contg., prepn. of)

IT 15525-45-8

RL: CAT (Catalyst use); USES (Uses)
(catalysts, for coupling of (chloromercuri)deoxyuridine with allyltrifluoroacetamide)

IT 96102-23-7
RL: RCT (Reactant)
(coupling of, with (chloromercuri)deoxyridine)

IT 383-65-3
RL: RCT (Reactant)
(coupling of, with (chloromercuri)deoxyuridine)

IT 65523-09-3
RL: RCT (Reactant)
(coupling of, with allyltrifluoracetamide)

IT 65505-76-2
RL: RCT (Reactant)
(coupling of, with allyltrifluoroacetamide)

IT 74855-51-9 78635-95-7 78635-96-8 78635-97-9 96280-61-4
RL: RCT (Reactant)
(nucleotide coupling reaction of, in synthesis of oligonucleotides incorporating **reporter groups**)

IT 96102-30-6P 96102-33-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and dimethoxytritylation of)

IT 96102-26-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and phosphorylation of, with methyl phosphodichloridate)

IT 96118-77-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with fluorescein isothiocyanate)

IT 96102-36-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with fluorodinitrobenzene)

IT 96230-55-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with isoluminol deriv.)

IT 96102-27-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and N-benzoylation of)

IT 96476-83-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT **96102-22-6P 96102-24-8P** 96102-25-9P 96102-28-2P
96102-31-7P 96102-34-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, in synthesis of oligonucleotides incorporating **reporter groups**)

IT 96102-35-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn., in synthesis of oligonucleotides incorporating **reporter groups**)

IT 27072-45-3
RL: RCT (Reactant)
(reaction of, with amino group-substituted oligonucleotides)

IT 70-34-8
RL: RCT (Reactant)
(reaction of, with aminohexyl-substituted oligodeoxynucleotide)

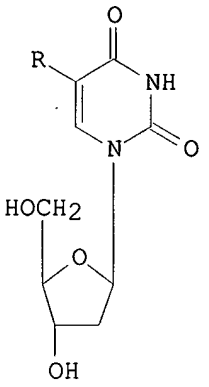
IT 66612-29-1
RL: RCT (Reactant)
(reaction of, with carboxyethenyl-substituted deoxyoligonucleotide)

IT 96102-32-8
RL: RCT (Reactant)
(trifluoroacetylation of)

IT 96102-29-3
RL: RCT (Reactant)

(N-benzoylation of)

L184 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2002 ACS
AN 1980:509555 HCAPLUS
DN 93:109555
TI Thymidine phosphorylase. Substrate specificity for 5-substituted 2'-deoxyuridines
AU Nakayama, Chikao; Wataya, Yusuke; **Meyer, Rich B., Jr.**; Santi, Daniel V.; Saneyoshi, Mineo; Ueda, Tohru
CS Dep. Pharm. Chem., Univ. California, San Francisco, CA, 94143, USA
SO J. Med. Chem. (**1980**), 23(8), 962-4
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
CC 7-3 (Enzymes)
Section cross-reference(s): 1
GI



I

AB The title compds. I (R = halogen, Me, CF3, CN, CHO, etc.) were evaluated as substrates of horse liver thymidine phosphorylase. An improved continuous spectrophotometric assay for phosphorolysis and transferase activities of the enzyme is described. I having electron-withdrawing 5-substituents at least the size of a Me group showed lower Km, and in most cases, Vmax values. Quant. structure-activity relations relating to catalytic efficiency for various substrates to a single variable, the inductive field const., are described.
ST thymidine phosphorylase specificity deoxyuridine analog; inductive field thymidine phosphorylase deoxyuridine
IT Linear free energy relationship
(of deoxyuridines, as substrates for thymidine phosphorylase)
IT Michaelis constant
(of thymidine phosphorylase)
IT Molecular structure-biological activity relationship
(enzyme-affecting, of deoxyuridine analogs)
IT Linear free energy relationship
(multiparameter, of deoxyuridine analogs as substrates of thymidine phosphorylase)
IT **50-89-5**, biological studies 50-90-8 50-91-9 54-42-2
59-14-3 **70-00-8 73-39-2 4494-26-2**
5116-24-5 15176-29-1 26639-00-9
74311-81-2
RL: BIOL (Biological study)
(as substrate for thymidine phosphrylase)

IT 9030-23-3
RL: BIOL (Biological study)
(substrate specificity of, for deoxyuridine analogs, QSAR in)

=> fil reg
FILE 'REGISTRY' ENTERED AT 14:17:37 ON 09 JUL 2002
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STRUCTURE FILE UPDATES: 8 JUL 2002 HIGHEST RN 437701-77-4
DICTIONARY FILE UPDATES: 8 JUL 2002 HIGHEST RN 437701-77-4

TSCA INFORMATION NOW CURRENT THROUGH January 7, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

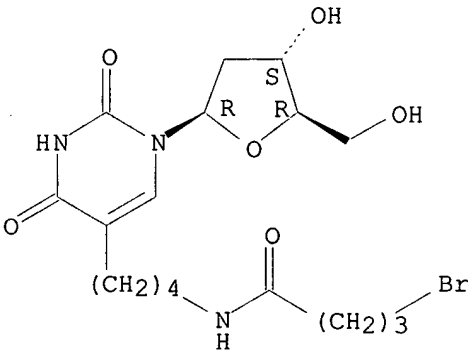
Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d ide can tot l192

L192 ANSWER 1 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **186696-59-3** REGISTRY
CN Uridine, 5-[4-[(4-bromo-1-oxobutyl)amino]butyl]-2'-deoxy- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H26 Br N3 O6
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

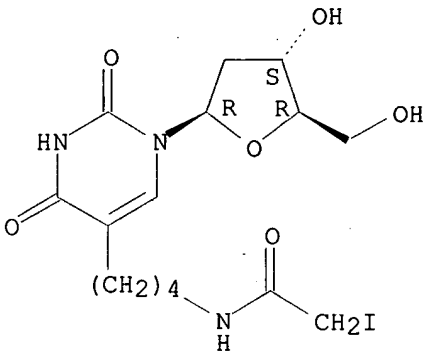
2 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:353707

REFERENCE 2: 126:153646

L192 ANSWER 2 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **186696-58-2** REGISTRY
CN Uridine, 2'-deoxy-5-[4-[(iodoacetyl)amino]butyl]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C15 H22 I N3 O6
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



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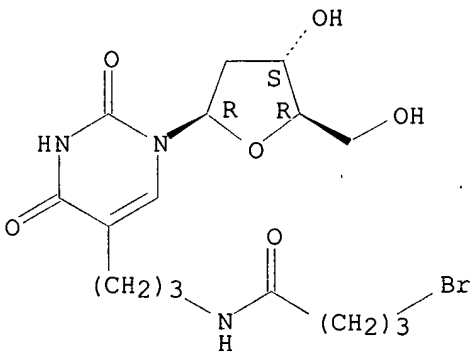
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:153646

L192 ANSWER 3 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **186696-57-1** REGISTRY
CN Uridine, 5-[3-[(4-bromo-1-oxobutyl)amino]propyl]-2'-deoxy- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H24 Br N3 O6
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



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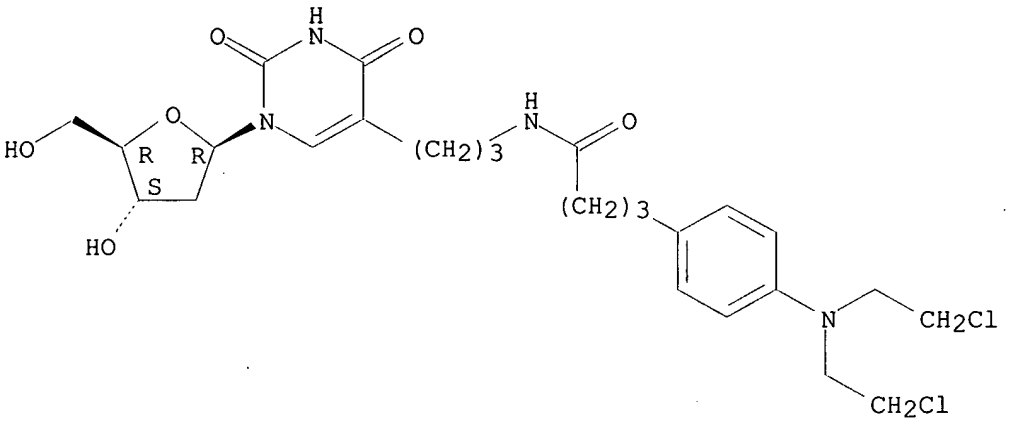
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:153646

L192 ANSWER 4 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **171258-27-8** REGISTRY
CN Uridine, 5-[3-[[4-[4-[bis(2-chloroethyl)amino]phenyl]-1-oxobutyl]amino]propyl]-2'-deoxy- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H36 Cl2 N4 O6
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



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4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 133:306344

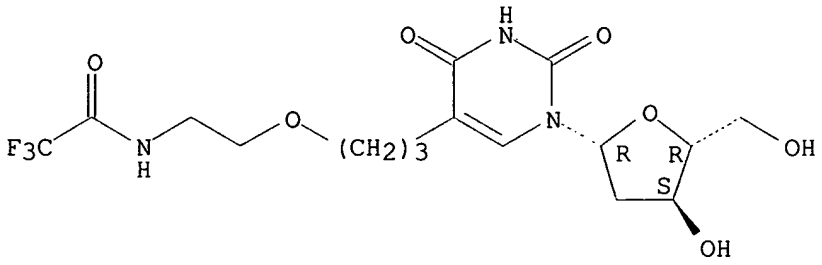
REFERENCE 2: 131:154471

REFERENCE 3: 124:308654

REFERENCE 4: 124:2498

L192 ANSWER 5 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **161601-20-3** REGISTRY
CN Uridine, 2'-deoxy-5-[3-[2-[(trifluoroacetyl)amino]ethoxy]propyl]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H22 F3 N3 O7
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1967 TO DATE)
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REFERENCE 1: 135:353707

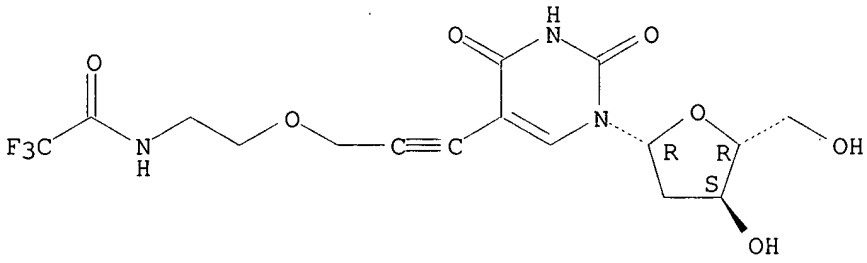
REFERENCE 2: 126:330802

REFERENCE 3: 126:153646

REFERENCE 4: 122:178406

L192 ANSWER 6 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **161601-19-0** REGISTRY
CN Uridine, 2'-deoxy-5-[3-[2-[(trifluoroacetyl)amino]ethoxy]-1-propynyl]-(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H18 F3 N3 O7
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

Absolute stereochemistry.



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4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:353707

REFERENCE 2: 126:330802

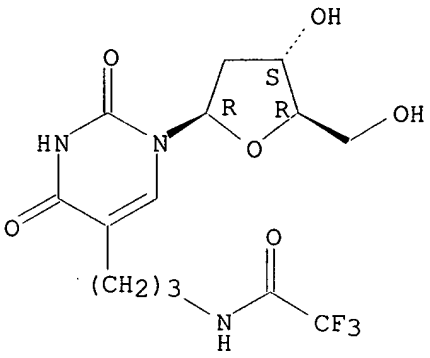
REFERENCE 3: 126:153646

REFERENCE 4: 122:178406

L192 ANSWER 7 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN **134158-63-7** REGISTRY
CN Uridine, 2'-deoxy-5-[3-[(trifluoroacetyl)amino]propyl]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C14 H18 F3 N3 O6**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:73170

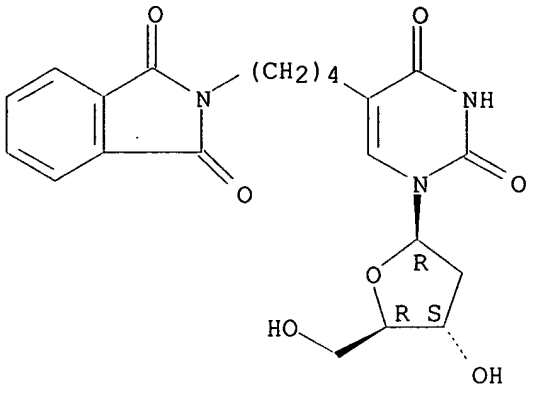
REFERENCE 2: 132:208083

REFERENCE 3: 126:199794

REFERENCE 4: 115:9259

L192 ANSWER 8 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **134141-36-9** REGISTRY
CN Uridine, 2'-deoxy-5-[4-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)butyl]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H23 N3 O7
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1967 TO DATE)
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REFERENCE 2: 126:330802

REFERENCE 3: 126:153646

REFERENCE 4: 122:178406

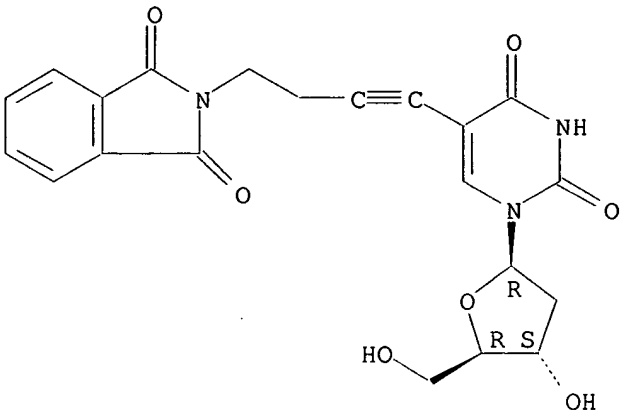
REFERENCE 5: 120:127925

REFERENCE 6: 119:221156

REFERENCE 7: 115:9259

L192 ANSWER 9 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **134140-85-5** REGISTRY
CN Uridine, 2'-deoxy-5-[4-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)-1-butynyl]-
(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H19 N3 O7
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1967 TO DATE)
7 REFERENCES IN FILE CAPLUS (1967 TO DATE)

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REFERENCE 2: 126:330802

REFERENCE 3: 126:153646

REFERENCE 4: 122:178406

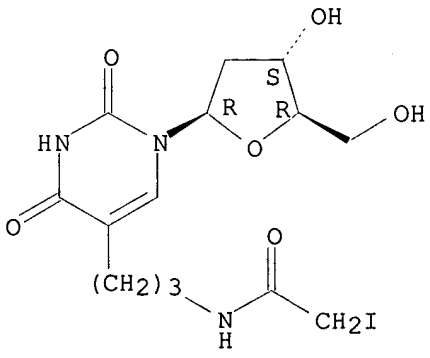
REFERENCE 5: 120:127925

REFERENCE 6: 119:221156

REFERENCE 7: 115:9259

L192 ANSWER 10 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **123265-52-1** REGISTRY
CN Uridine, 2'-deoxy-5-[3-[(iodoacetyl)amino]propyl]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C14 H20 I N3 O6
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:153646

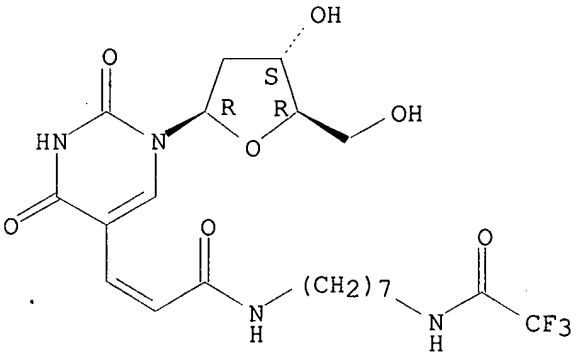
REFERENCE 2: 119:221156

REFERENCE 3: 115:9259

REFERENCE 4: 111:190574

L192 ANSWER 11 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **96102-24-8** REGISTRY
CN Uridine, 2'-deoxy-5-[3-oxo-3-[[7-[(trifluoroacetyl)amino]heptyl]amino]-1-propenyl]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H29 F3 N4 O7
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.
Double bond geometry unknown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

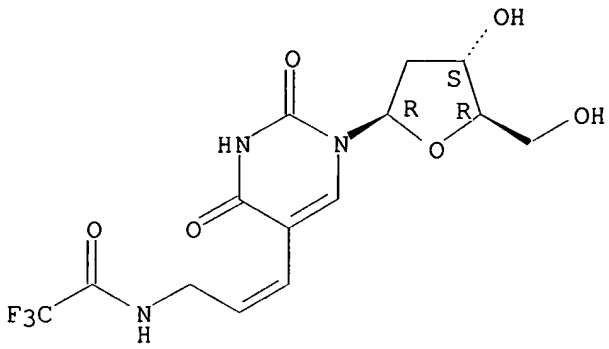
2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 115:9258

REFERENCE 2: 102:204247

L192 ANSWER 12 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **96102-22-6** REGISTRY
CN Uridine, 2'-deoxy-5-[3-[(trifluoroacetyl)amino]-1-propenyl]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C14 H16 F3 N3 O6**
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.
Double bond geometry unknown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

11 REFERENCES IN FILE CA (1967 TO DATE)
11 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:131133

REFERENCE 2: 133:204750

REFERENCE 3: 130:81787

REFERENCE 4: 117:186043

REFERENCE 5: 115:9258

REFERENCE 6: 113:111963

REFERENCE 7: 106:172474

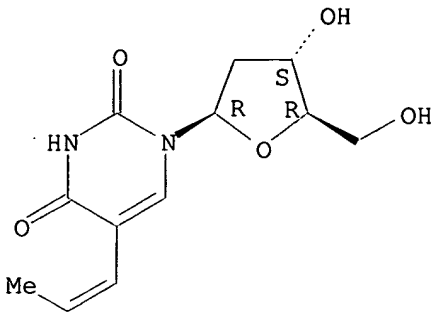
REFERENCE 8: 106:172449

REFERENCE 9: 106:81222

REFERENCE 10: 106:46883

L192 ANSWER 13 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **74311-81-2** REGISTRY
CN Uridine, 2'-deoxy-5-(1-propenyl)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 5-(1-Propenyl)-2'-deoxyuridine
FS STEREOSEARCH
MF **C12 H16 N2 O5**
LC STN Files: BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1967 TO DATE)
7 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 115:41448

REFERENCE 2: 113:224123

REFERENCE 3: 110:128633

REFERENCE 4: 103:16283

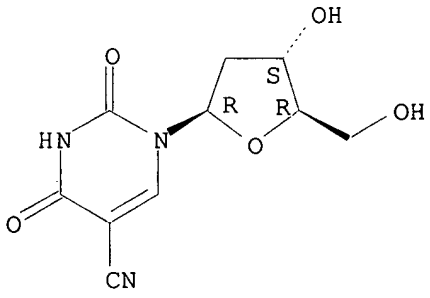
REFERENCE 5: 98:191291

REFERENCE 6: 95:7706

REFERENCE 7: 93:109555

L192 ANSWER 14 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **26639-00-9** REGISTRY
CN Uridine, 5-cyano-2'-deoxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Pyrimidinecarbonitrile, 1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,2,3,4-tetrahydro-2,4-dioxo- (8CI)
OTHER NAMES:
CN 5-Cyano-2'-deoxyuridine
CN 5-Cyanodeoxyuridine
FS STEREOSEARCH
DR 56653-12-4
MF C10 H11 N3 O5
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, EMBASE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

27 REFERENCES IN FILE CA (1967 TO DATE)
27 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:401971

REFERENCE 2: 136:179979

REFERENCE 3: 123:266

REFERENCE 4: 110:24209

REFERENCE 5: 104:28476

REFERENCE 6: 101:122468

REFERENCE 7: 100:188438

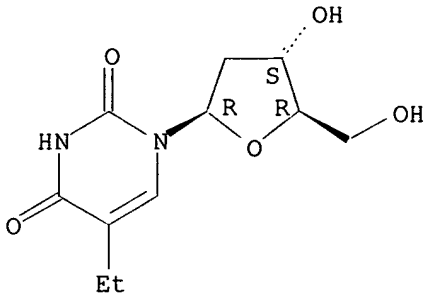
REFERENCE 8: 100:61328

REFERENCE 9: 98:209571

REFERENCE 10: 98:46574

L192 ANSWER 15 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **15176-29-1** REGISTRY
CN Uridine, 2'-deoxy-5-ethyl- (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN .beta.-5-Ethyl-2'-deoxyuridine
CN .beta.-5-Ethyldeoxyuridine
CN 2'-Deoxy-5-ethyluridine
CN 5-Ethyl-1-(2'-deoxy-.beta.-D-ribofuranosyl)uracil
CN 5-Ethyl-2'-deoxyuridine
CN 5-Ethyldeoxyuridine
CN Aedurid
CN Edoxudine
CN EDU
CN Epoxudine
FS STEREOSEARCH
DR 46895-01-6
MF **C11 H16 N2 O5**
CI COM
LC STN Files: ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT, PHAR, RTECS*, SPECINFO, TOXCENTER, USAN, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

264 REFERENCES IN FILE CA (1967 TO DATE)
17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
264 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:272759

REFERENCE 2: 136:217007

REFERENCE 3: 136:64094

REFERENCE 4: 136:17266

REFERENCE 5: 135:376707

REFERENCE 6: 135:340189

REFERENCE 7: 135:205505

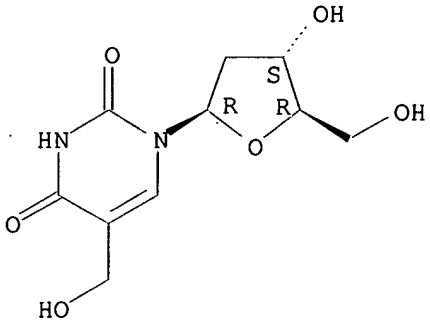
REFERENCE 8: 135:174643

REFERENCE 9: 135:116203

REFERENCE 10: 135:51041

L192 ANSWER 16 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **5116-24-5** REGISTRY
CN Thymidine, .alpha.-hydroxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Uridine, 2'-deoxy-5-(hydroxymethyl)- (6CI, 7CI, 8CI)
OTHER NAMES:
CN .alpha.-Hydroxythymidine
CN 2'-Deoxy-5-(hydroxymethyl)uridine
CN 2'-Desoxy-5-hydroxymethyluridine
CN 5-(Hydroxymethyl)-2'-desoxyuridine
CN 5-Hydroxymethyl-2'-deoxyuridine
CN 5-Hydroxymethyldeoxyuridine
FS STEREOSEARCH
MF C10 H14 N2 O6
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, CSNB, EMBASE, MEDLINE, NIOSHTIC, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

157 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
157 REFERENCES IN FILE CAPLUS (1967 TO DATE)
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:340083

REFERENCE 2: 136:199541

REFERENCE 3: 136:5251

REFERENCE 4: 136:4440

REFERENCE 5: 135:222687

REFERENCE 6: 135:180209

REFERENCE 7: 135:135424

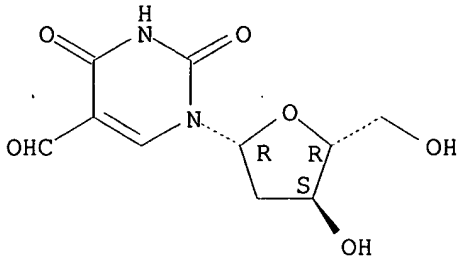
REFERENCE 8: 135:86583

REFERENCE 9: 134:219160

REFERENCE 10: 134:86488

L192 ANSWER 17 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **4494-26-2** REGISTRY
CN Uridine, 2'-deoxy-5-formyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Pyrimidinecarboxaldehyde, 1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,2,3,4-tetrahydro-2,4-dioxo- (7CI, 8CI)
CN 5-Pyrimidinecarboxaldehyde, 1-(2-deoxy-.beta.-D-ribofuranosyl)-1,2,3,4-tetrahydro-2,4-dioxo- (6CI)
OTHER NAMES:
CN 2'-Deoxy-5-formyluridine
CN 5-Formyl-2'-deoxyuridine
FS STEREOSEARCH
MF C10 H12 N2 O6
LC STN Files: BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, EMBASE, MEDLINE, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

68 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
68 REFERENCES IN FILE CAPLUS (1967 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:242869

REFERENCE 2: 135:315102

REFERENCE 3: 135:86583

REFERENCE 4: 135:15353

REFERENCE 5: 134:362886

REFERENCE 6: 134:321927

REFERENCE 7: 134:2074

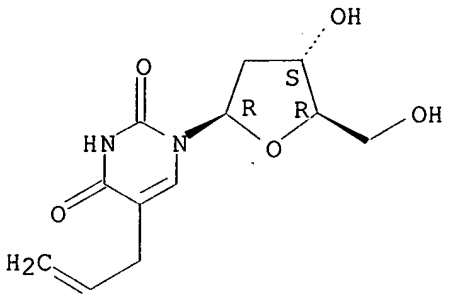
REFERENCE 8: 133:146438

REFERENCE 9: 133:129502

REFERENCE 10: 133:116791

L192 ANSWER 18 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **73-39-2** REGISTRY
CN Uridine, 2'-deoxy-5-(2-propenyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Uridine, 5-allyl-2'-deoxy- (7CI, 8CI)
OTHER NAMES:
CN 5-Allyl-2'-deoxyuridine
CN 5-Allyldeoxyuridine
FS STEREOSEARCH
MF **C12 H16 N2 O5**
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, EMBASE, MEDLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

22 REFERENCES IN FILE CA (1967 TO DATE)
22 REFERENCES IN FILE CAPLUS (1967 TO DATE)
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:144636

REFERENCE 2: 136:37859

REFERENCE 3: 133:129502

REFERENCE 4: 127:205817

REFERENCE 5: 126:182770

REFERENCE 6: 121:124571

REFERENCE 7: 116:6906

REFERENCE 8: 106:66985

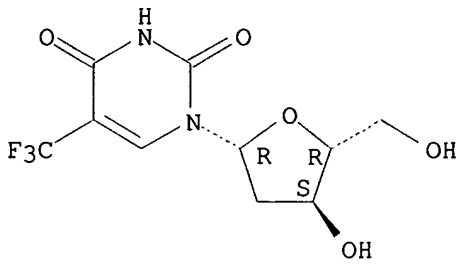
REFERENCE 9: 103:196357

REFERENCE 10: 101:143556

L192 ANSWER 19 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **70-00-8** REGISTRY
CN Thymidine, .alpha.,.alpha.,.alpha.-trifluoro- (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Uridine, 2'-deoxy-5-(trifluoromethyl)- (7CI)
OTHER NAMES:
CN 2'-Deoxy-5-(trifluoromethyl)uridine
CN 5-(Trifluoromethyl)-2'-deoxyuridine
CN 5-(Trifluoromethyl)deoxyuridine
CN 5-Trifluoromethyl-2'-deoxy-.beta.-uridine
CN 5-Trifluorothymidine
CN Trifluorothymidine
CN Trifluridine
CN Viroptic
FS STEREOSEARCH
MF C10 H11 F3 N2 O5
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PHAR, PROMT, RTECS*, SYNTHLINE, TOXCENTER, USAN, USPATFULL, VETU

(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

391 REFERENCES IN FILE CA (1967 TO DATE)
20 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
391 REFERENCES IN FILE CAPLUS (1967 TO DATE)
17 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:401971

REFERENCE 2: 136:345786

REFERENCE 3: 136:252482

REFERENCE 4: 136:123678

REFERENCE 5: 136:74472

REFERENCE 6: 136:64094

REFERENCE 7: 136:37866

REFERENCE 8: 136:17266

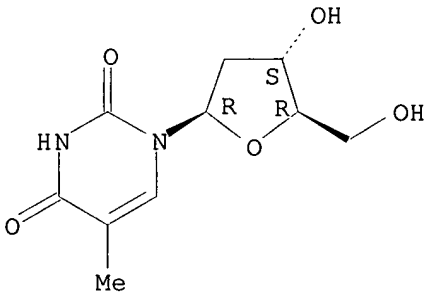
REFERENCE 9: 136:16468

REFERENCE 10: 135:376707

L192 ANSWER 20 OF 20 REGISTRY COPYRIGHT 2002 ACS
RN **50-89-5** REGISTRY
CN Thymidine (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN .beta.-D-Ribofuranoside, thymine-1 2-deoxy-
CN 1-(2-Deoxy-.beta.-D-erythro-pentofuranosyl)-5-methyl-2,4(1H,3H)-pyrimidinedione
CN 2'-Deoxythymidine
CN 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-5-methyl-
CN 5-Methyl-2'-deoxyuridine
CN 5-Methyldeoxyuridine
CN Deoxyribothymidine
CN Deoxythymidine
CN dT
CN DThyd

CN Thymidin
CN Thymine 2-desoxyriboside
CN Thymine deoxyriboside
CN Uridine, 2'-deoxy-5-methyl-
AR 157049-39-3, 157049-40-6
FS STEREOSEARCH
DR 35902-13-7
MF **C10 H14 N2 O5**
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6335 REFERENCES IN FILE CA (1967 TO DATE)
338 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6337 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 137:20545

REFERENCE 2: 137:17755

REFERENCE 3: 137:1836

REFERENCE 4: 136:401970

REFERENCE 5: 136:396666

REFERENCE 6: 136:395954

REFERENCE 7: 136:386335

REFERENCE 8: 136:386330

REFERENCE 9: 136:385047

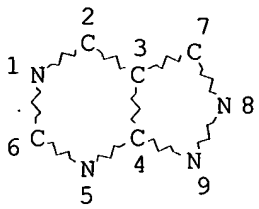
REFERENCE 10: 136:384397

=>

=>

=>

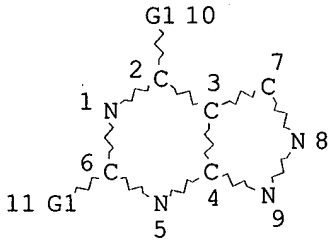
=> d sta que l48
L43 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 7
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L45 11393 SEA FILE=REGISTRY SSS FUL L43
L46 STR



O~Ak @12 13 S~Ak @14 15 N~O @16 17 N~O~Ak @18 19 20

N~N @21 22 N~Ak~N @23 24 25

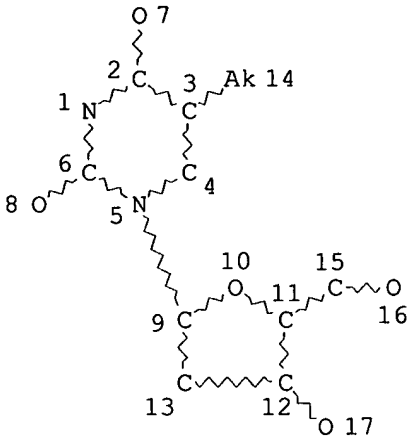
VAR G1=H/O/12/S/14/16/18/N/21/23
NODE ATTRIBUTES:
CONNECT IS M1 RC AT 7
CONNECT IS M1 RC AT 9
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 7
NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE
L48 2557 SEA FILE=REGISTRY SUB=L45 CSS FUL L46

100.0% PROCESSED 11393 ITERATIONS 2557 ANSWERS
SEARCH TIME: 00.00.01

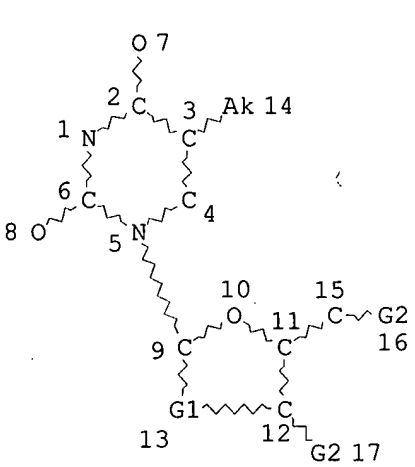
=> d sta que l166
L161 STR

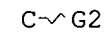


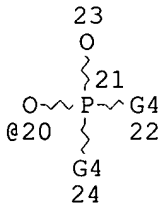
NODE ATTRIBUTES:
CONNECT IS M1 RC AT 13
CONNECT IS M1 RC AT 14
CONNECT IS M1 RC AT 16
CONNECT IS M1 RC AT 17
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

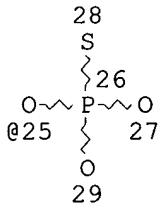
GRAPH ATTRIBUTES:
RSPEC 5
NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE
L163 37623 SEA FILE=REGISTRY CSS FUL L161
L164 STR









VAR G1=C/18
VAR G2=O/30/20/25
VAR G4=O/30
NODE ATTRIBUTES:
CONNECT IS M1 RC AT 14

```
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC   5
NUMBER OF NODES IS  31

STEREO ATTRIBUTES: NONE
L166       2269 SEA FILE=REGISTRY SUB=L163 CSS FUL L164

100.0% PROCESSED  37623 ITERATIONS                          2269 ANSWERS
SEARCH TIME: 00.00.17


=> d his

     (FILE 'HOME' ENTERED AT 10:56:25 ON 09 JUL 2002)
               SET COST OFF

     FILE 'HCAPLUS' ENTERED AT 10:56:36 ON 09 JUL 2002
               E PETRIE C/AU
L1           20 S E3,E6,E7,E11-E13
               E MEYER R/AU
L2          408 S E3,E7
L3          209 S E102-E106,E110
               E TBAONE J/AU
               E TABONE J/AU
L4           55 S E3-E6
               E HURST G/AU
L5           14 S E3,E7,E8
L6           12 S E33-E35
L7          707 S L1-L6
L8           79 S L7 AND OLIGO?
L9          138 S L7 AND (NUCLEIC OR ?NUCLEO?)
L10         138 S L8,L9
L11          25 S L7 AND (?CROSSLINK? OR ?CROSS LINK?)
L12          23 S L11 AND L10
L13          12 S L7 AND 3/SC,SX AND L11
L14          23 S L12,L13
               E CROSSLINK/CT
               E E13+ALL
L15       54748 S E2+NT
L16       45247 S E13+NT OR E14+NT OR E15+NT OR E16+NT OR E17+NT
L17           6 S L7 AND L16
L18          23 S L14,L17
               E PETRIE C/AU
L19          67 S E3-E7,E10-E13
L20           7 S L19 AND (L15,L17 OR ?CROSSLINK? OR ?CROSS LINK?)
L21           6 S L18 AND L20
L22           1 S L20 NOT L21
L23          23 S L18,L21
L24           3 S L23 AND (3H OR 125I OR 35S OR 14C OR 32P OR H3 OR I125 OR S35
L25           2 S L23 AND REPORT?
L26           5 S L24,L25
L27           2 S (US5824796 OR US4890348)/PN
               E US88-240474/AP,PRN
               E US89-353857/AP,PRN
L28           5 S E4
               E US93-049807/AP,PRN
L29           5 S E4
L30           5 S L28,L29
L31           5 S L30 AND L1-L30
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L32           5 S L27,L31 AND L1-L30
L33           3 S L26 NOT L32
L34           8 S L32,L33
L35          16 S L23 NOT L34

     FILE 'REGISTRY' ENTERED AT 11:36:25 ON 09 JUL 2002

     FILE 'HCAPLUS' ENTERED AT 11:36:25 ON 09 JUL 2002
                SET SMARTSELECT ON
L36          SEL L34 1- RN :     180 TERMS
                SET SMARTSELECT OFF

     FILE 'REGISTRY' ENTERED AT 11:36:26 ON 09 JUL 2002
L37          180 S L36

     FILE 'HCAPLUS' ENTERED AT 11:36:33 ON 09 JUL 2002
                SET SMARTSELECT ON
L38          SEL L35 1- RN :     147 TERMS
                SET SMARTSELECT OFF

     FILE 'REGISTRY' ENTERED AT 11:36:34 ON 09 JUL 2002
L39          147 S L38
L40          269 S L37,L39
L41            7 S L40 AND N2C3-NCNC3/ES
L42           27 S L40 AND NCNC3/ES
L43              STR
L44           50 S L43
L45        11393 S L43 FUL
                SAV L45 OWENS693/A TEMP
L46              STR L43
L47           50 S L46 CSS SAM SUB=L45
L48         2557 S L47 CSS FUL SUB=L45
                SAV L48 OWENS693A/A TEMP
L49           71 S L48 AND I/ELS
L50          686 S L48 AND S/ELS
L51            0 S L50 AND (35S OR S35)
L52          110 S L48 AND P/ELS
L53            0 S L52 AND (32P OR P32)
L54            1 S L48 AND (14C# OR C14#)
L55           26 S L48 AND (3H OR H3)
L56              STR L46
L57            9 S L56 SAM SUB=L48
L58          225 S L56 FUL SUB=L48
L59              SCR 2039
L60            0 S L59 SAM SUB=L48
L61            4 S L59 FUL SUB=L48
                E HYDROGEN, ION/CN
L62            3 S L48 AND (LABELED OR (D OR T)/ELS)
                E IODINE, ION/CN
L63            1 S E116
                E SULFUR, ION/CN
L64            1 S E144
                E CARBON, ION/CN
                E CARBON, ISOTOPE/CN
L65            1 S E31
                E PHOSPHORUS/CN
                E PHOSPHORUS, ISOTOPE/CN
L66            1 S E12
                E HYDROGEN, ISOTOPE/CN
L67            1 S E6

     FILE 'HCAPLUS' ENTERED AT 11:59:07 ON 09 JUL 2002
L68         2817 S L48
```

```
L69        1467 S L68 AND (PY<=1988 OR PRY<=1988 OR AY<=1988)
L70           1 S L69 AND L63-L67
L71          80 S L69 AND (3H OR H3 OR 125I OR I125 OR 35S OR S35 OR 14C OR C14
L72          15 S L7,L19 AND L68
L73           8 S L72 AND L69
L74           3 S L73 AND (LABEL? OR L71 OR ?CROSSLINK? OR ?CROSS LINK? OR REPO
L75          67 S L69 AND (LABEL? OR ?CROSSLINK? OR ?CROSS LINK? OR REPORT?(L)G
L76           5 S L69 AND GENET?/SC,SX
L77         340 S L69 AND (?OLIGO? OR ?NUCLEIC? OR ?NUCLEO?)
L78         341 S L76,L77
L79          88 S L58
L80          49 S L79 AND L69
L81          50 S L73,L80
                SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 12:14:53 ON 09 JUL 2002
L82         246 S E1-E247
L83          72 S L82 AND 46.150.18/RID
L84         174 S L82 NOT L83
L85         138 S L84 NOT (?CYAN? OR ?NITRIL?)/CNS
L86         119 S L85 NOT CARBOXIMID?
L87         118 S L86 NOT NITRO?
L88         115 S L87 NOT  NCNC2-SC4/ES
L89         100 S L88 NOT CARBOTHI?
L90          93 S L89 NOT BR/ELS
L91          87 S L90 NOT ETHANAMINE
L92          82 S L91 NOT CARBOXYLIC
L93          78 S L92 NOT ACETIC ACID
L94          30 S L93 AND (C11H15N5O5 OR C10H14N6O4 OR C12H17N5O5 OR C7H8N4S2 O
L95           4 S L94 AND C6H6N4S
L96           3 S L95 NOT 6014-06-8
L97           4 S L94 AND C6H6N4O
L98           1 S L97 AND 2942-47-4
L99           2 S L94 AND C11H14N4O5S
L100          1 S L99 AND 76690-46-5
L101          2 S L94 AND C11H15N5O5
L102          1 S L101 NOT 90914-39-9
L103          1 S L94 AND C7H8N4S2
L104          3 S L94 AND C10H13N5O5
L105          2 S L104 NOT 90914-38-8
L106          2 S L94 AND C6H6N4OS
L107          1 S L106 NOT 90914-36-6
L108          3 S L94 AND C10H13N5O5
L109          2 S L108 NOT 90914-38-8
L110          3 S L94 AND C10H14N6O4
L111          2 S L110 NOT 90914-44-6
L112         13 S L96,L98,L99,L102,L103,L105,L107,L109,L111
L113         17 S L94 NOT L112
L114         48 S L93 NOT L94
L115         77 S L85 NOT L112,L114
L116          8 S L115 AND (C7H10N6 OR C12H18N6O3 OR C6H15N OR C10H14N6O4 OR C1
L117         69 S L112,L114,L116

     FILE 'HCAPLUS' ENTERED AT 13:32:14 ON 09 JUL 2002
L118       2401 S L117
L119         33 S L118 AND L81
L120          2 S L119 AND (?LABEL? OR ?FLUORES? OR REPORT?(L)GROUP? OR ?CROSSL
L121         38 S L73,L74,L119,L120
L122         20 S L121 AND L78
L123         18 S L121 NOT L122
L124          1 S L122 AND DIAZO/TI
L125         19 S L122 NOT L124
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     FILE 'HCAPLUS' ENTERED AT 13:38:35 ON 09 JUL 2002
L126          7 S L118 AND L7,L19
L127        479 S L118 AND (?OLIGO? OR GENET?/SC,SX,CW,BI OR ?NUCLEOT? OR ?NUCL
L128        206 S L118 AND (?LABEL? OR ?FLUORES? OR REPORT?(L)GROUP? OR ?CROSSL
L129       1382 S L118 AND (PY<=1988 OR PRY<=1998 OR AY<=1988)
L130        314 S L129 AND L127
L131        125 S L129 AND L128
L132         47 S L127 AND L128 AND L131
L133          2 S L132 AND L125
L134         45 S L132 NOT L125
L135          7 S L134 AND OLIGO?
L136          6 S L135 NOT 17/SC
L137          8 S L133,L136
L138         56 S L125,L134 NOT L137
L139          4 S L138 AND OLIGON?
L140         12 S L137,L139
L141         52 S L138 NOT L140
L142         23 S L141 AND NUCLE?/CW
L143         12 S L142 NOT (18/SC OR 9/SC OR METABOLISM/TI)
L144         11 S L142 NOT L143
               SEL DN AN 10
L145          1 S L144 AND E248-E250
L146         25 S L140,L145,L143
               SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 13:49:46 ON 09 JUL 2002
L147        112 S E251-E362
L148         44 S L147 AND L117
L149         68 S L147 NOT L148

     FILE 'HCAPLUS' ENTERED AT 13:51:19 ON 09 JUL 2002

     FILE 'HCAPLUS' ENTERED AT 13:51:44 ON 09 JUL 2002

     FILE 'REGISTRY' ENTERED AT 13:52:04 ON 09 JUL 2002

     FILE 'HCAPLUS' ENTERED AT 13:52:39 ON 09 JUL 2002
L150        741 S L7,L19
L151          2 S L150 AND REPORT? GROUP?
L152         19 S L150 AND ?LABEL?
L153         34 S L150 AND (?FLUORES? OR DEUTER? OR TRITI?)
L154         48 S L151,L152,L153
L155          4 S L154 AND L68
L156          4 S L155 AND L1-L35,L68-L81,L118-L146,L150-L155
               SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 13:55:43 ON 09 JUL 2002
L157         11 S E363-E373
L158          8 S L157 NOT NCNC2-SC4/ES
L159            STR
L160         50 S L159 CSS SAM
L161            STR L159
L162         50 S L161 CSS SAM
L163      37623 S L161 CSS FUL
L164            STR L161
L165         41 S L164 CSS SAM SUB=L163
L166       2269 S L164 CSS FUL SUB=L163
               SAV OWENS693B/A L166
               DEL OWENS693B/A
               SAV OWENS693B/A L166 TEMP

     FILE 'HCAPLUS' ENTERED AT 14:04:57 ON 09 JUL 2002
L167      13125 S L166
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L168          17 S L167 AND L150
L169        7703 S L167 AND (PY<=1988 OR PRY<=1988 OR AY<=1988)
L170           5 S L168 AND L169
L171        2375 S L169 AND (?LABEL? OR ?FLUORE? OR DEUTER? OR TRITIUM? OR 3H OR
L172          86 S L169 AND (?CROSSLINK? OR ?CROSS LINK?)
L173           5 S L15,L16 AND L171
L174          88 S L170,L172,L173
L175          25 S L174 AND ?OLIGON?
L176          78 S L174 AND (?NUCLEO? OR ?NUCLEIC?)
L177           7 S L174 AND GENET?/SC,SX,CW
L178          26 S L175,L177
L179          13 S L167 AND REPORT? GROUP?
L180           3 S L169 AND L179
L181           8 S L170,L180
L182           5 S L174 AND L181
L183           4 S L175,L176,L177 AND L181
L184           8 S L181-L183
                 SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 14:09:16 ON 09 JUL 2002
L185          24 S E374-E397
L186           6 S L185 AND (C10H14N2O5 OR C11H16N2O5 OR C12H16N2O5 OR C14H18F3N
L187           2 S L185 AND NC4-C6/ES

     FILE 'HCAPLUS' ENTERED AT 14:13:48 ON 09 JUL 2002
                 SEL HIT RN L170

     FILE 'REGISTRY' ENTERED AT 14:14:09 ON 09 JUL 2002
L188          18 S E398-E415
L189          19 S L186,L187,L188

     FILE 'HCAPLUS' ENTERED AT 14:14:52 ON 09 JUL 2002
                 SEL HIT RN L180

     FILE 'REGISTRY' ENTERED AT 14:15:18 ON 09 JUL 2002
L190           7 S E416-E422
L191           3 S L190 NOT NC5/ES
L192          20 S L189,L191

     FILE 'HCAPLUS' ENTERED AT 14:16:06 ON 09 JUL 2002

     FILE 'REGISTRY' ENTERED AT 14:17:37 ON 09 JUL 2002
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